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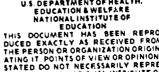
Education; \*Sciences

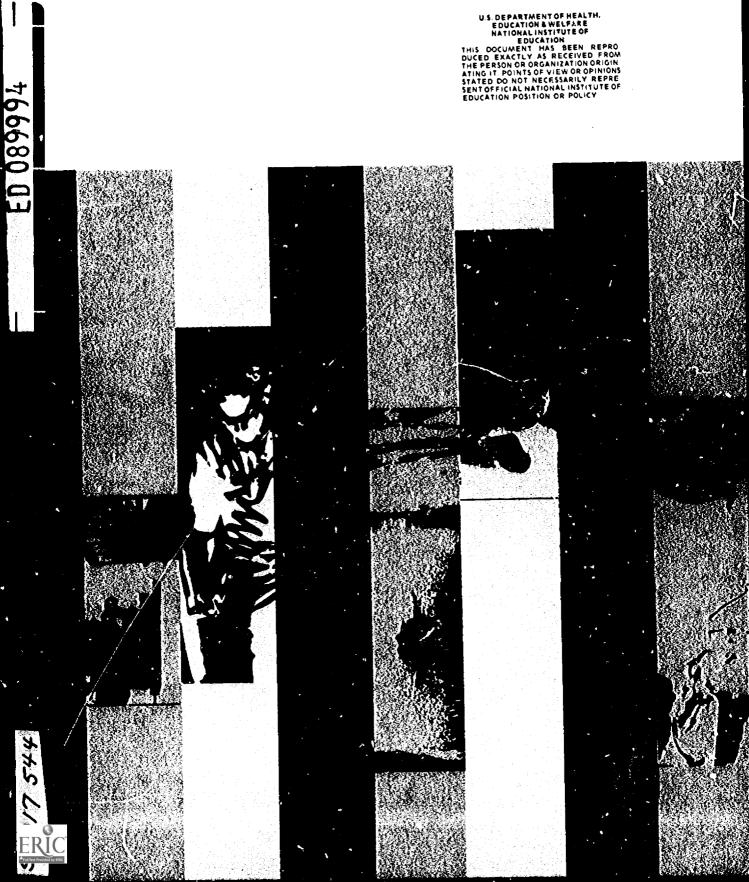
IDENTIFIERS \*National Science Foundation; NSF

### ABSTRACT

Listings of the National Science Foundation's grants and awards for 1972 are organized by topic areas. Within each topic area the entries are listed by state geographical locations. Each entry contains the name(s) of the person(s) conducting the research, the institution at which the research was conducted and the amount of the grant received. (JP)







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# National Science Foundation

Grants and Awards for Fiscal Year 1972



The yearly review of the Foundation's activities appears in a separate volume entitled "Twenty-Second Annual Report of the National Science Foundation, Fiscal Year 1972," NSF 73-1. It is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402

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# **GRANTS AND AWARDS**

## SCIENTIFIC RESEARCH PROJECT SUPPORT

### NON-CLASSISIED

#### DISTRICT OF COLUMBIA

NONE; OTHER PROGRAM AWARDS (16AWDS); \$12,581

#### MARYLAND

NONE; OTHER PROGRAM AWARDS (02AWDS); \$522

NONE; OTHER PROGRAM AWARDS (01AWDS); \$18,009

### BIOLOGY

### CELLULAR BIOLOGY

#### ALASAMA

### TUSKEGER INSTITUTE

WILLIAMS, JOHN W; COSIP D RESEARCH INITIATION - IN SITU HYBRIDIZATION STUDIES ON 1'HE NATURE OF DNA SEQUENCES IN LATERAL LOGP AXES OF LAMPBUISH CHROMOSOMES (Y010431); 24 MONTHS \$29,000

#### ARIZONA

#### ARIZONA STATE UNIVERSITY

CHURCH, KATHLEEN K; CHIASMA FORMATION DURING SPER-MATOGENESIS AND OGGENESIS (BOJO699); 24 MONTHS \$20,100

### UNIVERSITY OF ARIZONA

BERNSTEIN, HARRIS; GENETIC STUDIES WITH PHAGE TA (BOOSTOO 001); 24 MONTHS \$52,000

#### BERMUDA

#### BERMUDA BIOLOGICAL STATION FOR RESEARCH INC

STERRER, WOLFGANG E: SHORT SUMMER PROJECTS IN MARINE BIOLOGY, EMBRYOLOGY, AND PHYSIOLOGY (BOJ4:11): 12 MONTHS \$6,900

### CALIFORNIA

LIEB, MARGARET: OTHER PROGRAM AWARDS (01AWDS); 12 MONTHS

### CALIFORNIA IMSTITUTE OF TECHNOLOGY

MITCHELL, HERSCHEL K; REGULATION OF DEVELOPMENT IN DROSOPHILA (B02J344 001); 24 MONTHS \$50,000

LEWIS, EDWARD B; OPERATIONAL SUPPORT FOR A COLLECTION OF MUTANT TYPES OF DROSOPHILA MELANOGASTER (BO27416 001); 12 MONTHS \$41,300

HOOD, LEROY E; THE GENETIC CONTROL OF ANTIBODY DIVERSITY

AND EVOLUTION (B027605 001); 12 MONTHS \$66,000

BROKAW, CHARLES J; COMPUTER SIMULATION OF FLAGELLAR MOVEMENT (B0J20J5); 24 MONTHS \$46,000

DAVIDSON, ERIC H, AND BRITTEN, ROY J: GENE REGULATION IN DEVELOPMENT AND THE EVOLUTION OF GENOMIC REGULATORY SYSTEMS (BOJJAAI X00); 12 MONTHS \$20,000

HOOD, LEROY E; NONHISTONE CHROMOSOMAL PROTEINS AND GENE ACTIVATION IN EUKARYOTES (BOJA160); 24 MONTHS \$76,500

#### CALIFORNIA STATE COLLEGE AT SAN BERNARDINO

SOKOLOFF, ALEXANDER; MAINTENANCE OF THE TRIBOLIUM STOCK CENTER (BOSC476 X00); 12 MONTHS \$20,000 SOKOLOFF, ALEXANDER; MAINTENANCE OF THE TRIBOLIUM STOCK CENTER (BOJO476 X01); 12 MONTHS \$21,000

#### CALIFORNIA STATE UNIVERSITY, HUMBOLDT

BARRATT, RAYMOND W; OPERATION OF A GENETIC STOCK CENTER FOR NEUROSPORA AND ASPERGILLUS (BOJO187); 12 MO1 THS \$40,900

#### SALK INSTITUTE FOR BICLOGICAL STUDIES

BOURGEOIS-COHN, SUZANNE; IN VITRO STUDY OF REGULATION (B029559 X01); 12 MONTHS \$72,763

HORIBATA, KENGO; TUMORS EXPRESSING DIFFERENTIATED FUNC-TION IN CULTURE (B031341); 24 MONTHS \$35,000

SCHUBERT, DAVID R; PURCHASE OF ELECTRON MICROSCOPE (BOJ1151), 12 MONTHS \$16,000

NICOLSON, GARTH L, AND HYMAN, ROBERT; TOPOLOGICAL STUDIES OF THE SURFACE OF NORMAL AND TRANSFORMED CELLS (BOJ4178); 24 MONTHS \$60,800

#### SCRIPPS CLINIC AND RESEARCH FOUNDATION

LERNER, RICHARD A; MOLECULAR STRUCTURE OF THE IMMU-NOGLOBULIN RECEPTOR IN CONTINUOUS CULTURES OF DIPLOID HUMAN LYMPHOCYTES (BOJ4296); 24 MONTHS \$85,000

### STANFORD UNIVERSITY

YANOFSKY, CHARLES; GENETIC AND BIOCHEMICAL STUDIES OF THE TRYPTOPHAN OPERON (BOOGTOO XOJ); 12 MONTHS \$75,400

HEPLER, PETER K; CONTROL OF SPINDLE ORGANIZATION IN DIVID-ING PLANT CELLS (BO25152 002); 24 MONTHS \$90,000

GREEN, PAUL B; BIOPHYSICS OF PLANT GROWTH REGULATION (B023667 001); 24 MONTHS \$90,000

FRANKLIN, NAOMI C; TRANSCRIPTION REGULATION AT THE 'TRP'
OPERON OF 'ESCHERICHIA COLF AND THE 'N' OPERON OF BACTERIOPHAGE LAMBDA (B02909) X01); 12 MONTHS \$37,000

WESSELLS, NORMAN K: STUDIES IN MORPHOGENESIS AND CELL DIFFERENTIATION (BOJ:935); 12 MONTHS \$27,500

BERG, PAUL; PURCHASE OF A HIGH RESOLUTION ELECTRON MICROSCOPE (BOJJIGIO); 12 MONTHS \$5,600

BERG, PAUL; CONFERENCE ON TRANSCRIPTIONAL AND TRANSLA-TIONAL MECHANISMS ON EUCARYOTIC CELLS (BOJLIII); 12 MONTHS

#### UNIVERSITY OF CALIFORNIA, BERKELEY

LAETSCH, W M; REGULATION OF CHLOROPLAST DEVELOPMENT IN

CULTURED PLANT TISSUE (BOILDES OF); 24 MONTHS \$47,000 STERN, CURT; DEVELOPMENTAL GENETICS OF DROSOPHILA (B02J024 001); 12 MONTHS \$33,000

JONES, RUSSELL L; STUDIES ON GIBBERELLIC ACID-INDUCED EN-ZYME PRODUCTION FROM BARLEY ALEURONE J.AYERS (BO27468 001);

FOGEI,, SEYMOUR, AND MORTIMER, ROBERT K; MAINTENANCE OF A YEAST GENETICS STOCK CENTER (BO28935 001); 12 MONTAS \$20,000

BRANTON, DANIEL; GAS VESICLE DEVELOPMENT AND CONTROL (B032024); 24 MONTHS \$40,200

BRANTON, DANIEL, AND WOFSY, LEON; MEMBRANE ORGANIZATION AND REORGANIZATION-LYMPHOCYTE ANTIGEN RECEPTORS IN THE IMMUNE RESPONSE (BOJISTS); 12 MONTHS \$47,500

#### UNIVERSITY OF CALIFORNIA, DAVIS

ALLARD, ROBERT W; ENZYME POLYMORPHISMS IN PLANT POPULA. TIONS (BOIJZIJ 001); 24 MONTHS \$50,000

EDLIN, GORDON J; NUCLEOTIDE POOLS AND NUCLEIC ACID SYNTHESIS (BOI3528 002); 24 MONTHS \$55,500

LAIDLAW, HARRY H; MAINTENANCE OF A BEE GENETIC STOCK CENTER (B027855 001); 12 MONTHS \$20,300

GOTTLIEB, LESLIE D; GENETIC DIFFERENTIATION AND PLANT SPECIATION (B029484 X01); 12 MONTHS \$15,400



ARMSTRONG, PETER B; CELLULAR BASIS OF MORPHOGENESIS (BON0751); 24 MONTHS \$18,000

ABBOTT, URBULA K; TISSUE INTERACTIONS DURING NORMAL AND ABNORMAL MORPHOGENESIS (BOSISTS); 24 MONTHS \$48,200

BOYD, JAMES B; NONHISTONE CHROMOSOMAL PROTEIN'S AND GENE ACTIVATION IN EURARYOTES (B634159); 24 KONTHS \$23,50?

#### UNIVERSITY OF CALIFORNIA, INVINE

TEWARI, KRISHNA; BIOGENESIS OF CELL ORGANE(LES-STUDIES ON CHLOROPLASTS (B090014 001); 24 MONTHS \$60,000

TESSMAN, IRWIN; REPLICATION, RECOMBINATION AND MUTATION OF DNA (Bosses) 001); 6 MONTHS \$22,300

WULFF, DANIEL L; BACTERIAL GENES AFFECTING PHAGE LAMBDA DEVELOPMENT (BOSSIDS): 24 MONTHS \$48,700

#### UNIVERSITY OF CALIFORNIA, LOS ANGELES

EISERLING, FREDERICK A; GENETIC CONTROL OF VIRUS STRUC-TURE (BOISIST 003); 24 MONTHS \$76,000

MARTINEZ, RAPAEL J; STUDIES ON BACTERIAL FLAGELLA (BOISELL COI); 24 MONTHS \$55,000

FRANKER, COLIN K; INITIATION OF NUCLEAR DNA SYNTHESIS (BORDLIP XOI); 12 HONTHS \$10,000

### UNIVERSITY OF CALIFORNIA, RIVERSIDE

THOMSON, WILLIAM W; STRUCTURE, DEVELOPMENT, AND FUNCTION OF SALT GLANDS (B008189 001); 24 MONTHS \$20,600

LEWIS, LOWELL N; HORMONAL CONTROL OF CELLULASE IN CELL DEVELOPMENT AND SENESCENCE (B017850 601); 24 MONTHS \$35,000

BARTNICKI GARCIA, SALOMON; BIOCHEMISTRY OF CELL WALL DIF-FERENTIATION IN PHYTOPHTHORA (BOSTIES); 24 MONTHS \$69,000

#### UNIVERSITY OF CALIFORNIA, SAN DIEGO

SIMON, MELVIN 1; BIOSYNTHESIS AND REGULATION OF FLAGELLA (B015455 001); 24 MONTHS \$75,000

SATO, GORDON H; SELECTION OF HAPLOID MAMMALIAN CELLS IN TISSUE CULTURE (ROISZAE 001): 24 MONTHS \$50,000

TISSUE CULTURE (B015788 001): 24 MONTHS \$90,000

BRODY, STUART; GENETIC AND BIOCHEMICAL STUDIES OF MORPHOLOGICAL MUTANTS OF NEUROSPORA (B021217 001); 24 MONTHS \$88,000

GEIDUSCHEK, E PETER; CONTROL OF GENE EXPRESSION IN DEVELOPMENT (BO27042 001); 24 MONTHS \$15,000

STERN, HERBERT; PROGRAM FOR DEVELOPMENTAL BIOLOGY (B021384 001): 12 MONTHS \$52,600

STERN, HERBERT: REGULATORY MECHANISMS IN MEIOSIS AND MITOSIS (Boxesee XOS); 12 MONTHS \$100,000

HOWELL, STEPHEN H; CONTROL OF DNA METABOLISM IN CHLA-MYDOMONAS (Bajorat); 24 MONTHS \$51,400

MYDOMO?/AS (BOD?)7); 24 MONTHS \$81,400 STERN, HERBERT; WORKSHOP ON MOLECULAR TECHNIQUES IN DEVELOPMENTAL BIOLOGY (BOSES) X00); 12 MONTHS \$49,500

#### UNIVERSITY OF CALIFORNIA, SANTA BARBARA

PURVES, WILLIAM K; CONTROL MECHANISMS IN CUCUMBER HYPOCOTYL DEVELOPMENT (BOI3419 001); 24 MONTHS \$47,000

### UNIVERSITY OF CALIFORNIA, SANTA CRUZ

DAVERN, CEDRIC 1; THE MECHANICS OF BACTERIAL CHROMOSOME REPLICATION (BOJ1965); 24 MONTHS \$60,900

#### STANFORD UNIVERSITY-SCHOOL OF MEDICINE

LEDERBERG, JOSH'IA; A PROGRAM IN GENETICS AND MOLECULAR BIOLOGY (BOOST) 001); 6 MONTHS \$9,000

COHEN, STANLEY N. REPLICATION AND TRANSFER OF R-FACTORS (BM0581); 24 MONTHS \$65,000

## UNIVERSITY OF CALIFORNIA, SAN DIEGO-SCRIPPS INSTITUTION OF OCEANOGRAPHY

EPEL, DAVID; BIOCHEMISTRY OF FERTILIZATION AND EARLY DEVELOPMENT (BO27139 001); 12 MONTHS \$20,100

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO-SCHOOL OF MEDICINE RUTTER, WILLIAM J; CONTROL OF SYNTHESIS OF CELL-SPECIFIC PROTEINS (BOILESE XOL); 3 MONTHS \$31,400

### UNIVERSITY OF SOUTHERN CALIFORNIA-SCHOOL OF MEDICINE

LIEB, MARGARET; GENE INTERACTION IN BACTERIA AND PHAGE (B01449) 001); 24 NONTHS \$45,000

MOSTELLER, R D; RECULATION OF EXPRESSION OF THE TRYP-TOPHAN OPSRON OF ESCHERICHIA COLI- SIMULTANEOUS AND SEQUENTIAL DEREPRESSION (8049478 X01); 12 MONTHS \$25,000

### CANADA

### UNITERSITY OF CALGARY

SANDERSON, KENNETH E; MAINTENANCE OF A SALMONELLA GENETIC STOCK CENTRE (PO20184 001); 24 MONTHS \$12,000

#### COLORADO

### COLORADO STATE UNIVERSITY

TSUCHIYA, T; MAINTENANCE OF A BARLEY GENETIC STOCK CENTER (BOJO494); 24 MONTHS \$40,000

### UNIVERSITY OF COLORADO

HAM, RICHARD O; CLONAI, ANALYSIS OF DIFFERENTIATED MAM-MALIAN CELLS (B018508 001); 6 MONTHS \$17,000

PORTER, KEITH R; HIGH-VOLTAGE ELECTRON MICROSCOPY OF BIOLOGICAL MATERIALS (BOSTOSS 001); 4 MONTHS \$5,200

FORTER, KEITH; CONFERENCE ON THE STRUCTURE AND OR-GANIZATION OF HUMAN CHROMOSOMES (BOJIST); 12 MONTHS \$15,000

COLDSTEIN, LESTER; STUDY OF THE INVOLVEMENT OF PROTEINS AND RNAS IN INTERACTIONS BETWEEN NUCLEUS AND CYTOPLASM (BOJSOOP XOO): 12 MONTHS \$38,000

PICKETT-HEAPS, JEREMY D. CELL DIVISION AND MORPHOGENESIS IN ALOAE AND LOWER PLANTS (BOJIGIA), 24 MONTHS \$40,000

PRESCOTT, DAVID M; DNA OF THE HYPOTRICHOUS CILIATES (BOJELLE); 24 MONTHS \$60,000

MCCONKEY, EDWIN H; NUCLEOLAR FUNCTIONS CELL-FREE RIBOSOME SYNTHESIS (BOSIGIN) 24 MONTHS \$55,000

#### CONNECTICUT

#### WESLEYAN UNIVERSITY

FIRSHEIN, WILLIAM; MACROMOLECULAR BASIS FOR EUCARYOTIC DEVELOPMENT, A COHERENT AREA APPROACH (BOJ4153 X00); 12 MONTHS \$138,000

#### YALE UNIVERSITY

SUSSEX, IAN M; CHROMOSOMAL POLYTENY AND EMBRYO DEVELOP-MENT (BOO8708 001); 24 MONTHS \$20,000

GAREN, ALAN; GENETIC AND CHEMICAL STUDIES OF CELL DETER-MINATION IN DROSOPHILA (8027611 001): 12 MONTHS \$72,000

DOANE, WINIFRED W, AND POULSON, DONALD F. GENETIC REGULA-TORY MECHANISMS IN CELLULAR DIFFERENTIATION IN DROSO-PHILA (B029276 001); 24 MONTHS \$70,000

LENGYEL, PETER; INTERFERON, ANIMAL VIRUSES, AND PROTEIN SYNTHESIS (BOJO700 X00): 12 MONTHS \$96,000

LENGYEL, PETER; INTERFERON, ANIMAL VIRUSES AND PROTEIN SYNTHESIS (BOJO700 Xol): 12 MONTHS \$96,000

RUDDLE, FRANK H; MOLECULAR APPROACHES TO GENE MAPPING IN MAN (BOJLOG); 24 MONTHS \$75,000

#### YALE UNIVERSITY-SCHOOL OF MEDICINE

GEHRING, WALTER J; DEVELOPMENTAL GENETICS OF IMAGINAL DISCS IN 'DROSOPHILA' (B017e67 X02); 12 MONTHS \$42,900

ADELBERG, EDWARD A, AND BACHMANN, B J; MAINTENANCE OF ESCHERICHIA COLI K12 STOCK CULTURE COLLECTION (B022864 001); 12 MONTHS \$38,400

MARCHESI, VINCENT T; MOLECULAR TOPOGRAPHY OF CELL SUR-FACE RECEPTORS (BOSLIOI); 24 MONTHS \$85,000

#### DISTRICT OF COLUMBIA

### HOWARD UNIVERSITY

DUTTA, S K; COSIP D RESEARCH INITIATION - MITOCHONDRIAL GENE EXPRESSION IN MORPHOLOGICAL MUTANTS (Y010432); 15 MONTHS \$19,600

#### KOWARD UNIVERSITY-COLLEGE OF MEDICINE

AHLUWALIA, BALWANT S; THE ROLE OF RETINOL IN SPER-MATOGENESIS (BOJ1328): 12 MONTHS \$8,000

#### FLORIDA

### FLORIDA STATE UNIVERSITY

CROUSE, HELEN V, AND TAYLOR, J HFRBERT; CHROMOSOMES OF SCIARA (8008487 001): 24 MONTHS \$52,000

### PAPANICOLAOU CANCER RESEARCH INSTITUTE

SMITH, DAVID S; FINE STRUCTURE OF SENSORY AND MOTOR COM-PONENTS OF THE INSECT NERVOUS SYSTEM (BOIR117 XOZ); 12 MONTHS \$25,000

#### UNIVERSITY OF MIAMI-SCHOOL OF MEDICINE

WERNER, RUDOLF: MECHANISM OF DNA REPLICATION (8027140 001); 24 MONTHS \$80,000

WARREN, ROBERT H; DEVELOPMENTAL ULTRASTRUCTURE OF STRIATED MUSCLE-CYTOSKELETAL SYSTEMS AND MYOFIBRIL ASSEMBLY (BOSTOTE); 24 MONTHS \$15,000

#### GEORGIA

### ATLANTA UNIVERSITY CENTER

LUMB, JUDITH RAE; A STUDY OF DEPRESSION AND MOUSE LYMPHOMAS (Y010485): 15 MONTHS \$23,900

#### UNIVERSITY OF GLORGIA

DURE, LEON S III; BIOCHEMISTRY OF EMBRYOGENESIS AND GER-MINATION (B014642 001): 24 MONTHS \$48,000

CARLTON, BRUCE C; GENE-ENZYME STUDIES OF BACILLUS SUB-TILIS (BOJOGOS); 12 MONTHS \$14,500

GILES, NORMAN H; GENETIC AND BIOCHEMICAL STUDIES ON AROMATIC METABOLISM IN SELECTED PHOTOSYNTHETIC ORGANISMS (BOJSOJS); 24 MONTHS \$40,000



#### EMORY UNIVERSITY-SCHOOL OF MEDICINE

SCOTT, JUNE R; INTERACTION OF AN EXTRACHROMOSOMAL PROPHAGE WITH ITS HOST (B016926 001); 24 MONTHS \$30,000

#### HAWAH

#### UNIVERSITY OF HAWAIL

HUMPHREYS, TOM D 11; BIOCHEMICAL BASIS OF SPECIFIC CELL AS-SOCIATION (BOJIEIE): 1 MONTHS \$9,900

HUMPHREYS, TOM D II; BIOCHEMICAL BASIS OF SPECIFIC CELL AS-SOCIATION (BOSISIS 001), 24 MONTHS \$45,300

#### SUNCIS

#### CHICAGO HORTICULTURAL SOCIETY

BEADLE, GEORGE W; SEED COLLECTION AND MUTATION RESEARCH IN TEOSINTE (CORN RELATED) POPULATIONS (BOJIOSE); 14 MONTHS \$4,600

#### NORTHWESTERN UNIVERSITY

BURNETT, ALLISON L; CONTROL OF CELLULAR DIFFERENTIATION IN HYDRA (BOI7917 001); \$ MONTHS \$500

#### UNIVERBITY OF CRICAGO

LEWONTIN, RICHARD C; GENETIC HETEROZYGOSITY IN NATURAL POPULATIONS (B007135 X03); 12 MONTHS \$48,100

CHIANG, KWEN-SHENG; MOLECULAR MECHANISM OF NON-MEN-DELIAN INHERITANCE (BOID): 24 MONTHS \$50,000

FISCHMAN, DONALD A; MYOFIBRILLAR ASSEMBLY IN CARDIAC MUSCLE (B024586 001); 12 MONTHS \$12,000

STRAUSS, BERNARD S; STUDIES ON THE IN VIVO PRODUCTION OF BREAKS IN THE DNA OF EUCARYOTIC CELLS (BOSSISI XOI); 12 MONTHS 599 100

COHEN, MORREL H, AND ROBERTSON, ANTHONY D J; THE CONTROL OF DEVELOPMENT (BOX0784); 24 MONTHS \$51,000

ROIZMAN, BERNARD; ADVISORY AND PLANNING STUDY FOR THE DEVELOPMENT OF CELL CULTURE FACILITIES (BQ1938); 18 MONTHS 88 000

COZZARELLI, NICHOLAS R; DNA SYNTHESIS AND REPAIR IN BAC-TERIA AND BACTERIOPHAGE (BOJAJA); 24 MONTHS \$55,100

### UNIVERSITY OF ILLINOIS AT CHICAGO CIRCLE

CHEN, SHEPLEY S C; CHANGES IN DORMANT SEEDS DURING DRY STORAGE (2010750); 24 MONTHS \$14,000

### UNIVERSITY OF ILLINOIS AT URBANA

WHITT, GREGORY S; DIFFERENTIAL GENE FUNCTION DURING CEL-LULAR DIFFERENTIATION (B016483 001); 24 MONTHS \$41,000

REICHMANN, MANFRED E; VIRUS MULTIPLICATION (BO28427 X01); 12 MONTHS \$25,000

STEFFENSEN, DALE M; GENETIC AND BIOCHEMICAL STUDIES WITH DROSOPHILA RIBOSOMES AND TRANSFER RNA (BOXHGO) X01); 12 MONTHS \$30,600

DRAKE, JOHN W; STUDIES ON MUTATION (BOJO604 X00); 12 MONTHS

LAMBERT, R J; MAINTENANCE OF GENETIC AND CHROMUSOMAL TESTER STOCKS OF MAIZE (BOJIGO XOO); 12 MONTHS \$34,700

STOCUM, DAVID L; MORPHOGENETIC CONTROL DURING AMPHIBIAN LIMB REGENERATION (B0J4176); 24 MONTHS \$14,900

REICHMANN, M E; DEFECTIVE PARTICLES IN VIRUS INFECTION (BOJ4171); 24 MONTHS \$40,000

WIDHOLM, JACK M; GENETIC TRANSFORMATION WITH CULTURED PLANT CELL MUTANTS (BOJ)117: 12 MONTHS \$17,000

### INDIANA

### INDIANA UNIVERSITY, BLOOMINGTON

WHITE, DAVID; MORPHOGENESIS IN THE FRUITING MYXOBAC-TERIA (8020518 001); 24 MONTHS \$31,000

STARR, RICHARD C; MAINTENANCE OF A CULTURE COLLECTION OF ALGAE (8020480 001); 24 MONTHS \$43,300

BRIGGS, ROBERT, HUMPHREY, R. R. MALACINSKI, G M. AND SCHAIBLE, R; GENETIC STOCKS OF THE AXOLOTL (BOJCUS X00); 12 MONTHS \$28,000

LANDSBERGER, FRANK R; MAGNETIC RESONANCE STUDIES OF MEMBRANES, ENVELOPED VIRUSES, AND VIRUS-MEMBRANE INTERACTIONS (BOJ 1297); 24 MONTHS \$90,000

#### PURDUE UNIVERSITY

SMITH, L DENNIS; NUCLEO-CYTOPLASMIC INTERACTIONS IN CELL DIFFERENTIATION (BOOST41 001); 24 MONTHS \$44,400

CLEVER, ULRICH; CHROMGSOMAL ACTIVITY AND THE GENOMIC CONTROL OF CELL FUNCTION AND DEVELOPMENT IN POLYTENIC CELLS (8014150 001); 24 MONTHS \$109,900

JAFFE, LIONEL F; ELECTRICAL CURRENTS THROUGH DEVELOPING EGGS (BO17371 X01); 12 MONTHS \$40,000

ARONSON, ARTHUR I; MACROMOLECULE SYNTHESIS DURING EARLY SEA URCHIN EMBRYO DEVELOPMENT (8017947 001); 24 MONTHS 488000

#### **IOWA**

IOWA STATE UNIVERSITY OF SCIENCE & TECHNOLOGY

WEISHONS, W J; INTRAGENIC RECOMBINATION, POSITION EF-FECTS, AND DOSAGE COMPENSATION AT THE NOTCH LOCUS OF DROSOPHILA (BOJOT45): 24 MONTHS \$40,100

#### UNIVERSITY OF IOWA

Frankel, Joseph; A mutational study of cortical development in tetrahymena (Bosesse xxxx); 12 months \$25,600

WALKER, DONALD H JR: CONTROL OF CAPSID FORMATION AND DNA-PACKAGINO IN BACTERIAL VIRUSES (BOJULY); 24 MONTHS \$46,000

#### LOUISIANA

#### LOUISIANA STATE UNIVERSITY, BATON ROUGE

BOWDEN, JOE A; STUDIES ON THE GENETIC DEFECT IN BRANCHED-CHAIN KETOACIDURIA (BOS 181); 24 MONTHS \$40,000

#### SOUTHERN UNIVERSITY

ROBINSON, FLORENCE TAYLOR; COSIP D RESEARCH INITIATION - PATTERNS OF GERM CELL MIGRATION AS EXHIBITED BY THE RAP-TILIA (Y010470); 18 MONTHS (19,400

#### MAINE

#### **JACKSON LABORATORY**

GREEN, MARGARET; MAINTENANCE OF A MOUSE MUTANT STOCK CENTER (802: 147 001): 12 MONTHS \$53,000

#### MARYLAND

### AMERICAN TYPE CULTURE COLLECTION

CLARK, WILLIAM A; CURATORIAL SUPPORT FOR THE AMBRICAN TYPE CULTURE COLLECTION (B027490 001); 12 MONTHS \$100,000

### ATOMIC ENERGY COMMISSION

YOURNO, JOSEPH D; FRAMESHIFT MUTAGENESIS BY ICR COM-POUNDS IN 'SALMONELLA TYPHIMURIUM' (AGOOMO); 24 MONTHS \$32,000

#### JOHNS HOPKINS UNIVERSITY-SCHOOL OF MEDICINE

KELLY, THOMAS J JR; VIRAL DNA MOLECULES (BOJ416J); 24 MONTHS 475,000

CUATRECASAS, PEDRO; MOLECULAR TOPOGRAPHY OF CELL SUR-FACE RECEPTORS (BOLLOO): 24 MONTHS \$118,500

#### MASSACHUSETTS

### BOSTON UNIVERSITY

STRIGINI, PAOLO; RIBOSOMAL ROLE IN INFORMATIONAL SUPPRES-SION (BOJ1696); 7 MONTHS \$6,600

WALTERS, DAVID R; CELL ADHESION DURING INSECT DEVELOP-MENT (BOJZZ79); 24 MONTHS \$26,000

#### BRANDEIS UNIVERSITY

FULTON, CHANDLER: CELL DIFFERENTIATION AND ORGANELLE MORPHOGENESIS (BOISJA 001): 24 MONTHS \$71,200

CASPAR, DONALD L D; DIFFERENTIATED MEMBRANE ASSEMBLY AND INTERACTIONS (BOJ1248); 24 MONTHS \$80,000

#### CHILDRENS CANCER RESEARCH FOUNDATION

CASPAR, DONALD L D; DIFFERENTIATED MEMBRANE ASSEMBLY AND INTERACTIONS (BOJLIST); 12 MONTHS \$28,900

#### HARVARD UNIVERSITY

MESELSON, MATTHEW S; GENETIC RECOMBINATION, BIOCHEMISTRY OF DNA, AND RIBOSOMES AND MESSENGER RNA (B007768 X02); 12 MONTHS \$126,500

LEVINE, R P; THE GENETIC CONTROL OF CHLOROPLAST STRUCTURE AND FUNCTION IN 'CHLAMYDOMONAS' REINHARDI (B018666 001); 24 MONTHS \$50,000

PTASHNE, MARK; REPRESSORS, OPERATORS, AND GENE CONTROL (B029827 X01); 12 MONTHS \$94,000

STROMINGER, JACK L; BACTERIAL SPORE WALL SYNTHESIS AS A MODEL OF A DEVELOPMENTAL PROCESS (BOJOSPO X00); 12 MONTHS \$39,000

THOMAS, C A JR; MOLECULAR CYTOGENETICS (BOJIII8 X00); 12 MONTHS \$126,000

RAPER, JOHN R; INEFFICIENT ENERGY CONSERVATION IN THE B-MUTANT :SCHIZOPHYLLUM: (B031441); 24 MONTHS \$50,000

BRENNER, MICHAEL; BIOCHEMISTRY AND GENETICS OF DEVELOP-MENT OF THE CELLULAR SLIME MOLD (BOJOG); 24 MONTHS \$50,000

SCHACHNER, MELITTA; DISTRIBUTION OF ANTIGENIC DETERMI-NANTS ON BRAIN CELL SURFACES (BOJAISE): 24 MONTHS \$65,900 BOGORAD, LAWRENCE; INTRACELLULAR RELATIONSHIPS IN THE

DEVELOPMENT OF EUCARYOTIC CELLS (BOJ403); 12 MONTHS \$23,400 HARRISON, STEPHEN C, AND WILEY, DON C; DIFFERENTIATED MEMBRANE ASSEMBLY AND INTERACTIONS (BOJ411); 24 MONTHS \$27,000

### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

BELL, EUGENE; MOLECULAR STUDIES OF DIFFERENTIATING CELLS (B087326 X01); 12 MONTHS \$20,000



LODISH, HARVEY F; PROTEIN BIOSYNTHESIS DURING DEVELOP-MENT OF CELLULAR SLIME MOLDS (BO19108 X01): 12 MONTHS \$50,000

INGRAM, VERNON M. DETERMINATION AND DIFFERENTIATION OF EMBRYONIC ERYTHROPOLESIS IN CELL CULTURES (BOJOS70 X00); 12 MONTHS \$91.400

FOX, MAURICE S; STRUCTURE AND FATE OF UNDUPLICATED RECOMBINANTS OF BACTERIOPHAGE LAMBDA (BOJJ622): 24 MONTHS SMORM

#### BETINA FOUNDATION

WRIGHT, BARBARA E, AND THOMAS, DAVID A; THE MECHANISM OF ENHANCED ENZYME LEVELS DURING DIFFERENTIATION (BOJ2028), 24 MONTHS 200 600

#### TUPES UNIVERSITY

SIEGEL, ELI C; MUTATOR GENES OF 'ESCHERICHIA COLI'- MUTA-TION AND DNA REPAIR (BOI 1479 001); 24 MONTHS \$53,100

#### HARVARD UNIVERSITY-HARVARD MEDICAL SCHOOL

FRAENKEL. DAN G; BIOCHEMICAL GENETICS OF GLYCOLYSIS AND THE HEXOSS MONOPHOSPHATE SHUNT IN BACTERIA (BGJ2284 X00); 12 MONTHS 43.160

HUANG, ALICE S; DIFFERENTIATED MEMBRANE ASSEMBLY AND INTERACTIONS (BOJ4464); 24 MONTHS \$32,500

GOODENOUGH, DANIEL A; DIFFERENTIATED MEMBRANE AS-SEMBLY AND INTERACTIONS (BOSISS); 24 MONTHS \$92,700

#### TUFTS UNIVERSITY-SCHOOL OF MEDICINE

MALAMY, MICHAEL H: MECHANISMS OF TRANSLATIONAL CONTROL DURING BACTERIOPHAGE TO DEVELOPMENT AND ITS INHIBITION BY F FACTORS (BOXPARO XOI), 12 MONTHS \$30,000

#### MICHIGAN

#### MICHIGAN STATE UNIVERSITY

SNYDER, LOREN R; MECHANISMS OF THE CONTROL OF RNA SYNTHESIS (8030380): 24 MONTHS \$23,400

#### OAKLAND UNIVERSITY

BUTTERWORTH, FRANCIS M; HORMONAL AND GENETIC CONTROL OF DEVELOPMENT OF LARVAL ADIPONE TISSUE OF DROSOPHILA MELANOGASTER (B012669 001); 4 MONTHS \$5,300

#### UNIVERSITY OF MICHIGAN

SUSSMAN. ALFRED S; DEVELOPMENTAL PROCESSES IN NEU-ROSPORA (B006811 X03); 12 MONTHS \$44,500

DAVIS, ROWLAND; METABOLIC CHANNELING IN NEUROSPORA

(Bulliss 001); 24 MONTHS \$85,000 BERNS, MICHAEL W; LASER MICROBEAM STUDIES ON CHROMOSOMES (B024457 001); 24 MONTHS \$50,000

NACE, GEORGE W; DEVELOPMENT OF DEFINED AMPHIBIAN STRAINS (BOLLIAD: 12 MONTHS \$10.000

#### UNIVERSITY OF MICHIGAN-MEDICAL SCHOOL

FRIEDMAN, DAVID I; HOST AND VIRAL INFLUENCES ON PHAGE LAMBDA REPLICATION (B02959) X01); 12 MONTHS \$25,000

CHU, ERNEST H Y: MOLECULAR APPROACHES TO GENE MAPPING IN MAN (BOLISOL); 24 MONTHS \$19,600

#### MINNESOTA

ROSENBERG, MURRAY D; OTHER PROGRAM AWARDS (GIAWDS); 9 MONTHS \$31.260

### UNIVERSITY OF MINNESOTA

GRAY, ERNEST D; MOLECULAR EVENTS DURING CELL DIF-FERENTATION IN A PRIMITIVE MODEL SYSTEM (BOIZELI 003), 24 MONTHS \$43,000

ENFIELD, FRANKLIN D, POPULATION AND QUANTITATIVE GENETIC STUDIES OF ELECTROPHORETIC VARIANTS IN TRIBOLIUM CASTANE-UM (B012/51 00)): 24 MONTHS \$30,700

HARTL, D. L.; GENETIC AND POPULATION STUDIES OF SEGREGATION DISTORTION (B018726 001); 24 MONTHS \$40,000

ZISSLER, JAMES F; GENET'S RECOMBINATION IN VIRUSES (B020617 001); 24 MONTHS \$50,000

DWORKIN, MARTIN: DEVELOPMENTAL BIOLOGY OF A FRUITING

MYXOBACTERIUM (B029318 X01): 12 MONTHS \$23,700 SNYDER, L A: USE OF FEMALE STERILE MUTANTS IN EARLY DEVELOPMENT IN DROSOPHILA (R032352): 12 MONTHS \$10,000

#### MUSSOURI

## UNIVERSITY OF MISSOURI, COLUMBIA

EISENSTARK, ABRAHAM; MUTAGENIC AND LETHAL DAMAGE TO RECOMBINATIONLESS MUTANTS BY VISIBLE LIGHT AND BY TRYP-TOPHAN PHOTOPRODUCTS (BOJJ869): 24 MONTHS \$40,000

#### WASHINGTON UNIVERSITY

LEVI-KONTALCINI, RITA; IN-VIVO AND IN-VITRO ANALYSIS OF THE INSECT NERVOUS SYSTEM (BOI6330 X01); \$11,400

LEVI-MONTALCINI, RITA; IN-VIVO AND IN-VITRO ANALYSIS OF THE INSECT NERVOUS SYSTEM (B0163J0 X02); 12 MONTHS \$25,100

KENNELL, DAVID E: GENE EXPRESSION OF BACTERIA AND BACTERIAL VIRUSES INCIDIOS 2011: 24 MONTHS \$55,000

SILVER, SIMON D; POTASSIUM AND MANGANESE TRANSPORT SYSTEMS AS CONTROLLING ELEMENTS IN THE BACILLUS SUBTILIS CYCLE OF SPORE FORMATION AND GERMINATION (BOJIST); 24 MONTHS 580 000

APIRION, DAVID; GENETIC AND STRUCTURAL STUDIES OF 'E. COLI'
RIBOSOMES (BOJAISA); 12 MONTH3 \$40,000

#### NEW JERSEY

#### PRINCETON UNIVERSITY

COX, EDWARD C; 'ESCHERICHIA COLF MUTATOR GENES (BOI206)
601): 12 MONTHS \$10,000

MEINS, FREDERICK JR; HERITABLE CHANGES IN THE TUMOR STATE OF PLANTS (B017918 001); 24 MONTHS \$39,000

TOMPKINS, ROBERT; DEVELOPMENTAL GENETICS AND BIOCHEMIS-TRY OF BEHAVIOR (BOSSIE): 24 MONTHS \$16200

STEINBERG, MALCOLM S; CONTROLS GOVERNING ORGANIZATIONAL BEHAVIOR OF EMBRYONIC AND MALIGNANT CELLS (BOJOS98); 12 MONTHS \$20,000

WORCEL, ABRAHAM: MECHANISM OF CONTROL OF DMA REPLICA-TION IN E. COLI (BUJYUJ6); 24 MONTHS \$66,000

BONNER, JOHN T; DEVELOPMENT IN THE CELLULAR SLIME MOLDS (BOJJLIS X00): 12 MONTHS \$32000

#### RUTGERS UNIVERSITY

CHAMPE, SEWELL P; GENETIC AND BIOCHEMICAL STUDIES OF THE CLEAVAGE OF BACTERIOPHAGE PROTEINS (BOSSSES); 24 MONTHS \$48,000

#### **NEW YORK**

#### COLD SPRING HARBOR LAB OF QUANTITATIVE BIOLOGY

ZIPSER, DAVID; POLAR MUTANTS AND LAC OPERON FUNCTION (BOSPOLI X00): 12 MONTHS \$44:300

#### **COLUMBIA UNIVERSITY**

ZUBAY, GEOFFREY L: CONTROL OF BACTERIAL OPERONS IN CELL-FPEE SYSTEMS (BOISTS) 001); 12 MONTHS \$15,000

DARNELL, JAMES E; THE USE OF RNA VIRUSES IN THE STUDY OF CELL BIOLOGY (B027691 X01); 12 MONTHS \$33,900

WECHSLER, JAMES ALAN; CONTROL AND MECHANISM OF 'IN VIVO' DNA REPLICATION (BOSTLIT); 24 MONTHS \$30,000

#### DOWNSTATE MEDICAL CENTER AT BROOKLYN

BERNHEIMER. HARRIET P; RECOMBINATION BY ADDITION IN TRANSFORMATION REACTIONS IN PNEUMOCOCCUS (BOS4157); 12 MONTHS \$29,200

#### MT SINAI SCHOOL OF MEDICINE

CAPRA, J DONALD, AND KEHOE, J MICHAEL: AN INMUNOCHEMICAL AND IMMUNOGENETIC STUDY OF HUMAN Y GLOBULINS (B017046 001); 24 MONTHS \$85,000

LEVITAN, MAX: CYTOGENETIC STUDIES BEARING ON THE OR-GANIZATION OF THE GENOME (BO29417 XG1): 12 MONTHS \$20,000

#### **NEW YORK UNIVERSITY**

KAMBYSELLIS, MICHAEL P; STUDIES IN DEVELOPMENT OF INSECT CELLS (BO24168): 24 MONTHS \$30,200

#### PUBLIC HEALTH RESEARCH INSTITUTE OF NEW YORK

OISHI, MICHIO; MOLECULAR EVENTS ASSOCIATED WITH GENE FUNCTION, DNA REPLICATION AND RECOMBINATION (BOLDIE 002); 12 MONTHS \$46,000

DUBNAU, DAVID A; INTEGRATION OF TRANSFORMING DNA IN 'BACILLUS SUBTILIS' (B018146 001); 24 NONTHS \$64,600

#### ROCKEFELLER UNIVERSITY

HOTCHKISS, ROLLIN D, AND ROGER, MURIEL; STRUCTURAL PARAMETERS GOVERNING DNA ACTIVITY IN TRANSFORMATION AND RECOMBINATION (B006696 001); 24 MONTHS \$90,300

ZINDER, NORTON D; GENETIC AND PHYSIOLOGICAL STUDIES OF SMALL BACTERIOPHAGES (B029626 X01); 12 MONTHS \$150,700

VOELLER, BRUCE R: DEVELOPMENTAL AND EVOLUTIONARY STU-DIES OF PTERIDOPHYTES (BOJOGII); 24 MONTHS \$71,500

ZINDER, NORTON D. CONFERENCE ON THE STRUCTURE AND OR-GANIZATION OF SURFACES OF HUMAN CELLS, ROCKEFELLER UNIVERSITY, DECEMBER 10-12, 1971 (BOS1677); 12 MONTHS \$8,700

#### SLOAN-KETTERING INSTITUTE

LENARD, JOHN; STRUCTURE OF SOME ENVELOPED VIRUSES AND THEIR INTERACTIONS WITH CELL MEMBRANES (BOS LIPS); 24 MONTHS \$38,600

HAMMERLING, ULRICH; DISTRIBUTION OF ANTIGENIC DETERMINANTS ON BRAIN CELL SURFACES (BOSISSO); 24 MONTHS \$28,500

### STATE UNIVERSITY AT ALBANY

SAUNDERS, JOHN W JR; ECTODERM-MESODERM INTERACTIONS IN DEVELOPMENT (BOOGGS XGJ); 12 MONTHS \$29,000



#### TEXAS

#### BISHOP COLLEGE

FOWLKS, EDISON R; COSIP D RESEARCH INITIATION - MOLECULAR BIOLOGY OF MULTIPLE VERUSES (YOIGISE): 18 MONTHS \$22,000

UNIV OF TEX MD ANDRSN HOSP & TUX INST AT HUSTN

STUBBLEFIELD, T E; PROTEIN SYNTHESIS IN SYNCHRONIZED CELLS (\$9)4450 001); \$ MONTHS \$4,000

UNIV OF TEXAS AT AUSTIN

WAGNER, ROBERT P: STUDIES IN BIOCHEMICAL GENETICS (BOJOSSO); 12 KONTHS \$48,000

BLOCH, DAVID P; BUOYANT DENSITY BANDING OF CHROMATIN IN CHLORAL HYDRATE GRADIENTS (BOXO14); M MONTHS \$31,000 JUDD, BURKE H; CYTOGENETIC STUDIES OF DROSOPHILA

MELANOGASTER (BOSINST): 24 MONTHS \$72,500

#### UNIV OF TRXAS AT DALLAS

OUTZ, RERBERT; MOLECULAR GENETICS OF YEAST (BOISING OOI); 24 MONTHS \$50,000

#### HATU

HANLY, E W; OTHER PROGRAM AWARDS (01AWDS); 18 MONTHS \$34,500

#### VERMONT

#### MIDDLEBURY COLLEGE

SAUL, GEORGE B; MAINTENANCE OF A MORMONIELLA STOCK CENTER (B014132 001); 24 MONTHS \$30,000

#### YIRGINIA

#### UNIVERSITY OF VIRGINIA

KONIGSBERG, IRWIN R; ROLE OF COLLAGEN IN THE DEVELOPMENT OF MUSCLE CLONES 'IN VITRO (BOSSES) 00.0); 12 MONTHS \$50,000

REBHUN, LIONEL I; MOLECULAR ANATOMY, STRUCTURE AND ASSEMBLY OF INTERNAL MOTILE SYSTEMS IN CELLS (DOOSES XOZ); 12 MONTHS \$41,100

BODENSTEIN, DIETRICH; DIFFERENTIATION AND PROBLEMS OF NEURO DEVELOPMENT IN INSECTS AND LOWER VERTEBRATES (BOSO167 XOS), 12 MONTHS \$14,900

KADNER, ROBERT J. GENETIC CONTROL OF AMINO ACID TRANS-PORT (BO31993 XOI): 12 NONTHS \$18,000

#### VIRGINIA POLYTECHNIC INSTITUTE

ROSS, MARY H; GENETIC STOCK CENTER FOR THE 'BLATTELLA GER-MANICA' (B022954 001): 12 MONTHS \$19,600

#### UNIVERSITY OF VIRGINIA-SCHOOL OF MEDICINE

FLICKINGER, CHARLES J; ORIGIN AND RELATIONSHIPS OF CYTOPLASMIC MEMBRANES (BOJ2185); 24 MONTHS \$31,000

#### WASHINGTOM

### UNIVERSITY OF WASHINGTON

STADLER, DAVID R: RECOMBINATION AND GENE FUNCTIONS OF MICROORGANISMS (BOIR) 12 001); 8 MONTHS \$26,300

STADLER, DAVID R; RECOMBINATION AND GENE FUNCTION IN MICROORGANISMS (B014412 001), 24 MONTHS \$80,000

KELLER, JOHN M; CHANGES IN ANIMAL CELL MEMBRANES DURING MITOSIS (B019675 001): 24 MONTHS \$31,000

LAIRD, CHARLES D; CHROMOSOME STRUCTURE AND FUNCTION (8030600), 24 MONTHS \$80,000

CLELAND, ROBERT E, CONTROL OF DEVELOPMENT IN THE RED ALGA GRIFFITHSIA PACIFICA (BOJ1937); 24 MONTHS \$25,000

### UNIVERSITY OF WASHINGTON-SCHOOL OF MEDICINE

NAMEROFF, MARK A; MICROENVIRONMENTAL CONTROL OF MYOGENESIS (BOJ1979): 12 MONTHS \$19,000

FALKOW, STANLEY; EVOLUTION OF BACTERIAL PLASMIDS (BOJ2416); 12 MONTHS \$40,000

#### WISCONSIN

### SOCIETY FOR DEVELOPMENTAL BIOLOGY

RUDDLE, FRANK H; SYMPOSIUM ON GENETIC MECHANISMS OF DEVELOPMENT (BOSSIS); 12 MONTHS \$6,000

#### UNIVERSITY OF WISCONSIN, MADISON

AUERBACH, ROBERT; CONTROL MECHANISMS IN LYMPHOID DIF-FERENTIATION (BOOGST XOS); 12 MONTHS \$73,500

AUERBACH, ROBERT: CONTROL MECHANISMS IN LYMPHOID DIF-FERENTIATION (BOOMAIT X04); \$2,900

BORISY, GARY G. MECHANISMS OF ASSEMBLY AND FUNCTION OF MICROTUBULES AND THEIR ROLE IN CELL DEVELOPMENT (BOOSISS XOI): 12 MONTHS \$28,000

NEWCOMB, ELDON H, AND BECKER, WAYNE M; STUDIES IN PLANT CELL BIOLOGY (BOISE 46 004): 24 MONTHS \$90,000

LILIEN, JACK E; DEVELOPMENTAL ASPECTS OF CELL SURFACE UCTURE AND FUNCTION (B01783) 001); 24 MONTHS \$25,000

WRIGHT, SEWALL, EVOLUTION AND THE GENETICS OF POPULA-TIONS (Borniss 601), 12 MONTHS \$18,000

COHEN, PHILIP P; RNA POLYMERASES DURING AMPHIBIAN DIF-FERENTIATION AND DEVELOPMENT (BOJIOT); SA MONTHS \$55,000

DAHLBERG, JAMES E; SEQUENCE ANALYSIS AND STRUCTURE-FUNCTION RELATIONSHIPS OF NUCLEIC ACIDS (BOJEISE XOO); 12 MONTHS \$60,000

FITCH, WALTER M; SPECIAL APPROACHES TO THE STUDY OF EVOLUTIONARY RELATIONSHIPS (BOSES) 4 X00°); 12 MONTHS 412,000

NAMENWIRTH, MARION; REGIONAL CONTROL OF GENE EXPRESSION DURING EARLY EMBRYONIC DEVELOPMENT (BOSSEON); MONTHS 465,000

University of Wisconsin, Madison-Medical School

DANLBERG, JAMES E; NUCLEOTIDE SEQUENCE ANALYSIS OF GENETIC PUNCTUATION (BOISTI 001); 8 MONTHS \$6,600

#### WYOMING

#### UNIVERSITY OF WYOMING

SMITH-SONNEBORN, JOAN: STUDIES OF AGING IN 'PARAMECIUM' (BOJ1615); 12 MONTHS \$15,000

### ECOLOGY AND SYSTEMATIC BIOLOGY

#### ALABAMA

#### TUSKEGER INSTITUTE

SAINI, RAJINDER 8: COSIP D RESEARCH INITIATION - ASTER YEL-LOW MYCOPLASMA THAT CAN MODIFY SOME INSECT - PLANT RELA-TIONSHIPS (YOIGHT), 18 MONTHS \$11,800

#### UNIVERSITY OF ALABAMA IN BIRMINGHAM

SCHNITZLEIN, H N; COMPARATIVE ANATOMY OF THE FOREBRAINS OF FISHES (BOJO759): 24 MONTHS \$33,000

### UNIVERSITY OF ALABAMA, TUSCALOOSA

CROSS, EARLE A; ENERGY RELATIONSHIPS IN A SMALL FINITE NATURAL SYSTEM (BOJJSS); 12 MONTHS \$16,000

#### ALASKA

### UNIVERSITY OF ALASKA

CAMERON, JAMES N; SEASONAL CHANGES OF THE RESPONSES OF FISH TO LOW OXYGEN (BOS1188); 18 MONTHS \$45,300

UNIVERSITY OF ALASKA-INSTITUTE OF MARINE SCIENCE

BUTTON, D K; HEAVY METAL INHIBITION OF AQUATIC MICROORGANISMS (BOSI144); 12 MONTHS \$30,000

### ARIZONA

### ARIZONA STATE UNIVERSITY

HADLEY, NEIL F: EFFECTS OF GAMMA RADIATION ON THE POPULATION DYNAMICS OF A NOCTULD MOTH (BOJILLY), 24 MONTHS \$4,200 GERKING, SHELBY D. DISSERTATION RESEARCH-FISH PRODUCTION IN A THERMAL STREAM (BOJJULY), 24 MONTHS \$2,000

### UNIVERSITY OF ARIZONA.

HEED. WILLIAM B. AND KIRCHER, HENRY W; NUTRITIONAL ECOLO-GY OF DROSOPHILA (BOSESSI XOI), 12 MONTHS \$27,000

WERNER, F.G. DOCTORAL DISSERTATION RESEARCH - ECOLOGICAL AND CYTOLOGICAL STUDIES OF CHAMAEMYIIDAE (BOXO246); 18 MONTHS \$800

HENDRICKSON, J R; OPERATIONAL SUPPORT FOR PUERTO PENASCO MARINE BIOLOGY FACILITY (BOJ4878); 12 MONTHS \$9,600

#### ARKANSAS

### UNIVERSITY OF ARKANSAS

SMITH, EDWIN B; SYSTEMATIC STUDIES IN THE GENUS 'COREOPSIS' (COMPOSITAE)- SPECIES EAST OF THE ROCKY MOUNTAINS (BOSOPIE); 24 MONTHS \$22,900

### CAUFORNIA

#### CALIFORNIA ACADEMY OF SCIENCES

ESCHMEYER, WILLIAM N, AND CHEN, LO-CHAI; EVOLUTION AND BIOLOGY OF THE SCORPIONFISH SUBFAMILY SEBASTINAE (BOISIOS 001); 24 MONTHS \$31,100

FREIHOFER, WARREN C; EVOLUTIONARY STUDIES OF NERVE PAT-TERNS OF PSRCOID FISHES (BANKSI); 24 MONTHS \$22,000

EXCHWEYER, WILLIAM N: CURATING THE FISH COLLECTION OF THE CALIFORNIA ACADEMY OF SCIENCES (BOSSASS XOO); 12 MONTHS \$34,700

ARNAUD. PAUL H JR: CURATORIAL SUPPORT FOR THE ENTONOLO-GY COLLECTION (EGJ3837 X00); 12 MONTHS \$42,900

### CALIFORNIA INSTITUTE OF TECHNOLOGY

PATTERSON, CLAIR C; BIOLOGICAL DISCRIMINATION FACTORS FOR METALS WITHIN NATURAL ECOSYSTEMS (BOJIOSE\*); 12 MONTHS \$18,000



#### CALIFORNIA STATE POLYTECHNIC UNIV. FOMONA

FORCE, DON C; COMPETITION AMONG PARASITES ATTACKING A COMMON INSECT HOST (BOISTIES): 24 MONTHS \$18200

### CALIFORNIA STATE UNIVERSITY, CHICO

KISTNER, DAVID H: A SPECIES REVISION OF CERTAIN TRIBES OF THE SUBFAMILY ALEOCHARINAE (COLEOPTERA: STAPHYLINIDAE) (BOGGGG XG): 12 MONTHS \$13500

#### CALIFORNIA STATE UNIVERSITY, SAN DIEGO

LILLEGRAVEN, JASON A; SALVAGE AND STUDY OF LATE EOCENE
FOSSIL MAMMALS FROM THE SAN DIEGO AREA, SOUTHERN CALIFORNIA (BOSOJI): 21 MONTHS \$20 000

#### CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO

THIERS, HARRY, SUILLUS FLORA (BOILFIT 001); 12 MONTHS \$11,000

#### CLAREMONT GRADUATE SCHOOL

CARLQUIST, SHERWIN; THE EVOLUTION OF WOOD (B014092 001); 24 MONTHS \$22,000

CARLQUIST, SHERWIN; DOCTORAL DISSERTATION RESEARCH-COM-PARATIVE AND FIELD STUDIES ON SARCODES AND OTHER MONOTROPOIDEAE (ERICACEAE) (BOJISIS), 12 MONTHS \$3,100

### LOS ANGELES COUNTY MUSEUM OF NATURAL HISTORY

WHISTLER, DAVID P: SUPPORT OF VERTEBRATE PALEONTOLOGY COLLECTION IN THE NATURAL HISTORY MUSEUM OF LOS ANGELES COUNTY (BOJISIS XOD): 12 MONTHS 173.000

#### MONTEREY PENINSULA COLLEGE

GILMARTIN, AMY 3; QUANTIFICATION OF POPULATION VARIABILITY (BOSSOIA 001): \$1,700

### UNIVERSITY OF CALIFORNIA, BERKELEY

WILSON, ALLAN C; COMPARATIVE BIOCHEMISTRY AND IMMU-NOCHEMISTRY OF VERTEBRATE PROTEINS (BOIJII) 001); 24 MONTHS \$10,000

WAKE, DAVID B; EVOLUTIONARY BIOLOGY OF AMPHIBIANS (BOITER OCE); 24 MONTHS \$38.800

ORNDUFF, ROBERT; ORIGIN AND FUNCTION OF HETEROSTYLY IN

FLOWERING PLANTS (BOITEIS GOI); 24 MONTHS \$41,900 CALVIN, MELVIN; PARTICULATE AND DISSOLVED ORGAN MATTER

IN MONO LAKE (BOSSOS XOS): 12 MONTHS \$47,600

LINSLEY, E G; CERAMBYCIDAE OF NORTH AMERICA (BOJI120 X00); 12
MONTHS 83,200

SNYDER, WILLIAM C; TAXONOMY AND NOMENCLATURE OF 'GIB-BERELLA FUSARIUM MONILIFORME' (BGJ1:09); 24 MONTHS \$41,700 BARLOW, GEORGE W; DOCTORAL DISSERTATION RESEARCH-

BARLOW, GEORGE W; DOCTORAL DISSERTATION RESEARCH-EVOLUTION OF ELECTRICAL BEHAVIOR IN THE SOUTH AMERICAN WEAKLY ELECTRIC FISHES (GYMNOTOIDEI) (BOJ1440); IA MONTILS \$3,700 HEINRICH, BERND; THE PHYSIOLOGICAL ECOLOGY OF TEMPERA-

TURE REGULATION IN INSECTS (BOJISU): 24 MONTHS \$18,000 SPIETH, PHILIP T; GENETIC VARIATION AMONG WILD STRAINS OF NEUROSPORA (BOJI099); 24 MONTHS \$32,100

SAVAGE, D E; DOCTORAL DISSERTATION RESEARCH- A REVIEW OF

THE MERYCOIDODONTIDAE (BOJ290J); 12 MONTHS \$1,400

DALY, HOWELL Y; BIOSYSTEMATICS OF BEES OF THE GENUS CERATINA AND ALLIES (BOJIOS); 24 MONTHS \$23,300

ORNDUFF, ROBERT; DOCTORAL DISSERTATION RESEARCH: THE EVOLUTION OF HETEROSTYLOUS BREEDING SYSTEMS IN 'OXALIS' (BOJUTO); 18 MONTHS \$3,200

#### UNIVERSITY OF CALIFORNIA, DAVIS

HAMILTON, WILLIAM J III; BEHAVIOR AND ECOLOGY OF TROPICAL MIXED AVIAN FLOCKS (B017180 001); 12 MONTHS \$7,100

GOLDMAN, CHARLES R; PLANKTON COMMUNITY ECOLOGY IN NORTHERN CALIFORNIA LAKES (BOLDOS2 002); 3 MONTHS \$5,000

HAMILTON, WILLIAM J III: THERMAL ECOLOGY AND THERMOREGU-LATORY BEHAVIOR OF BEETLES (B028512 X01); 12 MONTHS \$30,100

DOBZHANSKY, THEODOSIUS, AND AYALA, FRANCISCO J; EVOLU-TIONARY PATTERNS IN NEOTROPICAL 'DROSOPHILA' (BOJOSS); 24 MONTHS \$70,100

EDLIN, GORDON J; CHROMOSOME ORGANIZATION AND BACTERIAL EVOLUTION (BOJ2520 X00); 12 MONTHS \$17,200

WEBSTER, GRADY L; DOCTORAL DISSERTATION RESEARCH-MONO-GRAPHIC STUDIES IN 'CNIDOSCOLUS' (BOSIGIO); 12 MONTHS \$1,900

STEBBINS, G LEDYARD: COMPARATIVE ECOLOGY OF THE PLANT FAMILY SAXIFRAGACEAE (BOJJI80); 24 MONTHS \$38,600

FLECK, RAYMOND A: A SYSTEMS APPROACH TO CONTROLLING PESTICIDE CONTAMINATION OF THE SAN JOAQUIN VALLEY (BOJJ72J X00): 12 MONTHS \$120,000

### UNIVERSITY OF CALIFORNIA, IRVINE

MACMILLEN, RICHARD E: DOCTORAL DISSERTATION RESEARCH - PHYSIOLOGICAL ECOLOGY OF REPTILES AND MAMMALS (BG50132); 24 MONTHS \$4,000

LENHOFF, HOWARD M; MOSQUITO CONTROL BY HYDRA (BOJ1068); 12 MONTHS \$23,900

### UNIVERSITY OF CALIFORNIA, LOS ANGELES

NAME INN, PETER PLATE PENNSYLVANIÁN VERTEBRATES OF CSN-TEAL COLORADO (B01997) 001); 24 MONTHS \$20,000

howell, thomas R; doctoral dissertation research on Population ecology of cassin's auklet (Bojossy), 12 months \$3,400

BPOWN, JAMES H; DOCTORAL DISSERTATION RESEARCH-DYNAMICS OF SOME POPULATIONS OF DESERT PUPFISH (BOSONS); 12 MONTHS 81 1000

LANE, N GARY, DOCTORAL DISSERTATION RESEARCH-PALEOZOOLOGY OF MISSISSIPPIAN CAMERATE CRINOIDS (BOSO201); 24 MONTHS \$500

OLSON, EVERETT C; PERMIAN TERRESTRIAL VERTEBRATES (BOJINSI X00); 12 MONTHS \$2,900

BARTHOLOMEW, GEORGE A; DOCTORAL DISSERTATION RESEARCH - 'THE COLONIZING ABILITY OF PIKAS' (BOJ1446): 12 NONTHS \$1,100

HOWELL, THOMAS R; DOCTORAL DISSERTATION RESEARCH-FORAC-ING STRATEGIES AND FEEDING SPECIALIZATIONS IN SANDPIPERS (BONDIS); 24 MONTHS \$1,500

BARTHOLOMEW, GEORGE A; ECOLOGICAL PHYSIOLOGY AND BEHAVIOR (BOJ2917 X00); 12 MONTHS \$23,000

#### University of California, Riverside

PENGELLEY, E T<sub>1</sub> MECHANISMS CONTROLLING THE PHYSIOLOGY OF HIBERNATION (BOOSES) 501); 24 MONTHS \$42,000

PRATT, P F; ANION ADSORPTION IN TROPICAL SOILS AS A FACTOR IN NITROGEN CYCLINO BY PLANTS (BOITTI) 601); 12 MONTHS \$10,000 DEBACH, PAUL; BIOSYSTEMATICS AND PHYLOGENY OF SPECIES OF 'APHYTIS' (BOITTIS OI); 24 MONTHS \$45,100

PINTO, JOHN D; TAXONOMIC RELATIONSHIPS AND SPECIATION MECHANISMS (BO30907); 24 MONTHS \$22,000

GILLETT, GEORGE W; EXPERIMENTAL AND TAXONOMIC STUDY OF 'BIDENS' (ASTERACEAE) AND 'CYRTANDRA' IN HAWAII AND THE SOUTH PACIFIC (BOSTOS): 24 MONTHS 221:000

#### UNIVERSITY OF CALIFORNIA, SAN DIEGO

WILLIAMS, FRANCIS; TAXONOMIC REVISION OF THE GENUS CARANGOIDES' (BOJIII): 24 MONTHS \$34,900

#### UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

AUDY, J RALFH; MONOGRAPH OF WORLD TROMBICULIDAE AND LEEUWENHOLKIIDAE (BOISSES X01); 12 MONTHS \$30,800

UNIVERSITY OF CALIFORNIA, SAN DIEGO-SCRIPPS INSTITUTION OF OCEANOGRAPHY

FLEMINGER, A; STUDY OF EPIPLANKTONIC POPULATIONS OF CALA-NOID COPEPODS (B0J2076); 24 MONTHS \$46,000

#### COLORADO

#### UNIVERSITY OF COLORADO

BOCK, CARL E; RELATIONSHIP OF TERRITORIALITY AND FOOD AVAILABILITY TO POPULATION REGULATION (BOJOS17); 24 MONTHS \$30,000

### CONNECTICUT

### UNIVERSITY OF CONNECTICUT

RETCENMEYER, CARL W; DISSERTATION RESEARCH-INFLUENCE OF VEGETATION AND TERRITORY ON AVIAN MATING SUCCESS (BOJ1716); 24 MONTHS \$66,300

SCHULTZ, R JACK; EVOLUTION OF ALL-FEMALE FISHES (B03/45/ X00); 12 MONTHS \$25,000

#### YALE UNIVERSITY

THOMSON, KEITH S; STUDY OF THE LOBE-FINNED FISHES AND RE-LATED AMPHIBIA (BO2882) X01); 12 MONTHS \$16,700

MILLER, RICHARD S; ECOLOGY OF INTERSPECIES COMPETITION (BOZDIII XOI); 12 MONTHS \$20,700

REMINGTON, CHARLES L; DOCTORAL DISSERTATION RESEARCH ON POLLINATION SYSTEMS IN SOLIDAGO, AQUILEGIA AND CASTILLEJA (BOJOIJS); 24 MONTHS \$2,900

BORMANN, F H; HYDROLOGIC-NUTRIENT CYCLE INTERACTION IN UNDISTURBED AND MANIPULATED FOREST ECOSYSTEMS (BOJOSES X00); 12 MONTHS \$84,600

MOROWITZ, HAROLD J; DOCTORAL DISSERTATION RESEARCH IN SYSTEMATICS OF THE MESOZOA AND EVOLUTION OF MULTICELLU-LAR ANIMALS (BOSIOSE): 24 MONTHS \$2,400

LAR ANIMALS (BOJIOSE): 24 MONTHS \$2400
ASHMOLE, N PHILIP, AND MILLER, RICHARD S; DOCTORAL DISSER-

TATION RESEARCH - POPULATION ECOLOGY OF CASSIN'S AUKLET
(BBJISTY), 18 MONTHS \$2,900

KIRSCH, JOHN A W; STUDIES IN MARSUPIAL SYSTEMATICS (BOJZOEI X00); 12 MONTHS \$15,700

LEV:N, DONALD A; GENE FLOW AND POPULATION STRUCTURE IN PHILOX (BOX100 X00); 12 MONTHS \$29,600

JORDAN, PETER A; DOCTORAL DISSERTATION RESEARCH. ECOLOGI.
CAL AND TAXONOMIC INVESTIGATIONS OF AN ENDANGERED SPECIES, THE RED WOLF (CANIS RUFUS) (BOJETAS); 12 MONTHS \$2,800



LEVIN, DONALD A: DOCTORAL DISSERTATION RESEARCH, LOCAL DIFFERENTIATION IN 'LIATRIS CYLINDRACEA' (BOJUST): 18 MONTHS 12 MG

WEGENER, PETER P; BUBBLE INDUCED VERTICAL MASS TRANS-PORT IN WATER (KOLIOSE XOO\*), 12 MONTHS \$6,700

#### DISTRICT OF COLUMBIA

#### AMERICAN ASSOCIATION OF MUSEUMS

MCGRATH, KYRAN M: ADVISORY COMMITTES FOR THE EVALUATION OF SYSTEMATIC BIOLOGY COLLECTIONS IN THE UNITED STATES (BOLLISO): 14 MONTHS 120,000

#### AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES

OLIVE, JOHN R; SECOND NATIONAL BIOLOGICAL CONGRESS (BOJISST\*), 12 MONTHS \$18,000

#### GRORGETOWN UNIVERSITY

COLWELL, R R; SYSTEMATIC STUDY OF THE GENUS 'VIBRIO' (BOSISOS X00): 12 MONTHS \$38,000

#### NATIONAL ACADEMY OF SCIENCES

KELLERMANN, HENRY J: PARTIAL SUPPORT OF THE COMMITTEE FOR INTERNATIONAL ENVIRONMENTAL PROGRAMS (CJ10193 005\*); 9 MONTHS \$10.000

#### SMITHSONIAN INSTITUTION

SHETLER, STANWYN G; FLORA NORTH AMERICA PROGRAM (BOJ1715); 12 MONTHS \$29,500

CUATRECASAS, JOSE; TAXONOMIC STUDY OF NEOTROPICAL PHANEROGAMS (BOSIOSE XOO); 12 MONTHS \$25,000

### NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL

OLIVER, R. H; SUPPORT OF V GENERAL ASSEMBLY INTERNATIONAL BIOLOGICAL PROGRAM (C J 10098 DIS); 11 MONTHS \$20,000

DECARLO, M. R. A STUDY OF EDIBLE LEGUMES (CJ10226); 18 MONTHS \$5,000

#### FLORIDA

#### **FAIRCHILD TROPICAL GARDEN**

TOMLINSON, PHILLP B; SYSTEMATIC STEM ANATOMY OF TROPICAL MONOCOTYLEDONS (BGJ1844 X00): 12 MONTHS \$24,000

#### FLORIDA STATE UNIVERSITY

SHORT, ROBERT B; SENSORY STRUCTURES OF SCHISTOSOME CER-CARIAE (TREMATODA) (BOJO90J); 24 MONTHS \$30,000

#### ORGANIZATION FOR TROPICAL STUDIES

SPENCER, JACK T; COMPARATIVE ECOLOGICAL STUDY OF TROPICAL LOWLAND FOREST COMMUNITIES (BO2559) 001); 12 MONTHS \$192,900

#### UNIVERSITY OF FLORIDA

MATURO, FRANK J S JR, DOCTORAL DISSERTATION RESEARCH-SYSTEMATICS OF THE MARINE BRYOZOAN 'PARASMITTINA NITIDA' (YERRILL) (BOJ1281): 24 MONTHS \$4,100

DEEVEY, EDWARD S; HISTORICAL ECOLOGY OF THE MAYA AREA (BOJJISO), 12 MONTHS \$10,000

EMMEL, THOMAS C; CHROMOSOME EVOLUTION IN THE LEPIDOP-TERA (BOJLIST), 24 MONTHS \$28,000

### UNIVERSITY OF MIAMI

PLISKE, THOMAS E, AND DODSON, CALAWAY H; CHEMICAL IN-TERACTION BETWEEN PLANTS AND INSECTS (BOJJI97); 24 MONTHS \$80,000

#### UNIVERSITY OF FLORIDA-FLORIDA STATE MUSEUM

WEBB, S DAVID; PHYLOGENETIC STUDIES OF TRAGULIDAE AND OTHER QUASIRUMINANTS (BOJJSOO); 24 MONTHS \$18,000

## UNIVERSITY OF MIAMI-SCHOOL OF MARINE AND ATMOSPHERIC SCIENCES

PROVENZANO, ANTHONY J JR; SYSTEMATIC STUDIES ON HERMIT CRABS AND OTHER DECAPOD CRUSTACEANS (BOUTOTS OOS): 12 MONTHS 41,100

TAYLOR, DENNIS L; THE BASIS OF CELLULAR INTERACTION- ALGAL -INVERTEBRATE SYMBIOSIS (B019790 001); 24 MONTHS \$70,000

VOSS, GILBERT L; SYSTEMATICS OF THE CEPHALOPODS (B024994 X01); 12 MONTHS \$23,400

ROBINS, CRICHARD, SYSTEMATIC STUDIES OF OCEANIC FISHES OF THE FAMILIES OPHIDIDAE, GOBIDAE AND SERRANIDAE (BOZELIO X01); 12 MONTHS \$22,000

ROBINS, C RICHARD; DOCTORAL DISSERTATION RESEARCH- A REVI-SION OF THE SHARK GENUS MUSTELUS (BGJ02/29); 12 MONTHS \$1,000

BAYER, FREDERICK M; SYSTEMATIC STUDIES OF THE OCTOCORAL-LIA OF THE WESTERN ATLANTIC OCEAN (BOJO741); 24 MONTHS \$30,100

#### GEORGIA

#### **EMORY UNIVERSITY**

MURDY, WILLIAM H; THE ROLE OF URBANIZATION IN PLANT EVOLUTION (8029601 X01); 12 MONTHS \$9,500

### UNIVERSITY OF GEORGIA

ATYEO, WARREN T; SUPEASPECIFIC TAXA OF THE ANALGOIDEA (ACARINA) (BOISIOS OOI): 24 MONTHS \$32,000

JONES, SAMUEL B JR; SYSTEMATICS OF 'VERNONIA' (COMPOSITAE) (BO20687 001); 24 MONTHS \$18,100

WIEGERT, RICHARD G: TROPHICDYNAMICS OF THERNAL SPRING ECOSYSTEMS (BORIESS 001); 24 MONTHS \$70,500

JONES, S B JR. DISSERTATION RESEARCH ON THE SYSTEMATICS OF

'LYSIN'ACHIA' (BOJ0074); 18 MONTHS \$1,700
PLUMMER, GATHER L: DOCTORAL DISSERTATION RESEARCH-

ANALYSIS OF LAND USE PATTERNS (Boroses); 12 MONTHS \$600

JONES, SAMUEL B JR; DOCTORAL DISSERTATION RESEARCH-VEGETATION DYNAMICS (BOJESEN), 12 MONTHS \$1,300 ROSS, HERBERT H: DOCTORAL DISSERTATION RESEARCH- A REVI-

ROSS, HERBERT H; DOCTORAL DISSERTATION RESEARCH- A REVISION OF THE GENUS 'CHEUMATOPSYCHE' IN NORTH AMERICA (BOJJOG4); 12 MONTHS \$1,600

COLEMAN, JAMES R; SYSTEMATICS OF VERBESINA COMPOSITAE (BOJ4129): 24 MONTHS \$16,200

### UNIVERSITY OF GEORGIA-AGRICULTURAL EXPERIMENT STATION

HANLIN, RICHARD T, AND LUTTRELL, E S; DEVELOPMENTAL MORPHOLOGY OF ASCOMYCETES AND THEIR IMPERFECT STATES (B028666 X01); 12 MONTHS \$16,500

#### HAWAII

#### BERNICE P BISHOP MUSEUM

GRESSITT, J LINSLEY: BIOGEOGRAPHIC RELATIONSHIPS OF NEW GUINEA AND NEW CALEDONIA (BOIJ731 001), 24 MONTHS \$35,000

ST. JOHN, HAROLD, SUPPORT FOR PANDANUS RESEARCH (BO17365 XOI), 12 MONTHS \$7,900

SAMUELSON, G ALLAN; BIOSYSTEMATICS OF ALTICINAE, GENERA OF THE EASTERN HEMISPHERE (BOJL289): 24 MONTHS \$23,000

#### UNIVERSITY OF KAWAII

HARDY, D ELMO; DIPTERA OF HAWAII (BO28604 X01); 18 MONTHS \$16,200

THEOBALD, WILLIAM L; COMPARATIVE ANATOMICAL AND DEVELOPMENTAL STUDIES IN UMBELLIFERAE (BOJOSSS); 21 MONTHS \$14,200

HARDY, D ELMO; PUBLICATION OF TWO MONOGRAPHS ON TEPHRITIDAE (NOIJOSIT'), 12 MONTHS \$5,000

#### IDAHO

#### UNIVERSITY OF IDAHO

HORNOCKER, MAURICE O, AND BIZEAU, ELWOOD G; ECOLOGY OF THE GREATER SANDHILL CRANE (BOJ4592 X00), 12 MONTHS \$8,000

#### ILLINOIS

#### FIELD MUSEUM OF NATURAL HISTORY

INGER, ROBERT F; GRADUATE STUDIES IN SYSTEMATIC 200LOGY AND PALEONTOLOGY (8008789 001); 10 MONTHS \$21,700

BURGER, WILLIAM C; NEW FLORA OF COSTA RICA AND RELATED FIELD WORK (Boss446 001); 24 MONTHS \$37,000

HERSHKOVITZ, PHILIP; MONOGRAPH OF NEW WORLD PRIMATES, VOLUME & CEBIDS (BOSOSOS): 24 MONTHS \$45,500

WILLIAMS, LOUIS O; FLORISTIC FIELD WORK IN CENTRAL CENTRAL AMERICA (BO3/190): 24 MONTHS \$29,000

DYBAS, HENRY: CARE AND USE OF SYSTEMATIC COLLECTIONS OF INSECTS AND OTHER ARTHROPODS (BOJISIO X00): 12 MONTHS \$50,600

SOLEM, G ALAN; PURCHASE OF A SCANNING ELECTRON MICROSCOPE (BG34521°); 24 MONTHS \$4,500

### NORTHWESTERN UNIVERSITY

BROWN, FRANK A JB; INFLUENCE ON ORGANISMS OF VERY WEAK EXTRA-PHOTIC ELECTROMAGNETIC FIELDS (BOJIO40); 24 MONTHS \$55,700

#### SOUTHERN ILLINOIS UNIVERSITY - CARBONDALE

KLIMSTRA, W D; DOCTORAL DISSERTATION RESEARCH IN THE FIELD SCIENCES (Boscies); 12 MONTHS \$3,900

### UNIVERSITY OF CHICAGO

PARK, THOMAS; POPULATION ECOLOGY OF 'TRIBOLIUM' (BO21846 X09): 12 MONTHS \$18,000

SCHOPF, THOMAS J M, AND GOOCH, JAMES L; SPECIATION IN THE SEA (BOJOSTO); 24 MONTHS \$47,000

RADINSKY, LEONARD B; MAMMALIAN BRAIN EVOLUTION (BOSIESS); 24 MONTHS \$30,000

GARBER, EDWARD D, ENZYMES AND PROTEINS AS GENETIC AND TAXONOMIC TOOLS IN THE GENUS 'USTILAGO' (BOJROSO), B4 MONTHS \$50,000

#### UNIVERSITY OF ILLINOIS AT CHICAGO CIRCLE

BARDACK, DAVID, CRETACEOUS TELEOSTEAN FISHES (BOSOSIS), 12 MONTHS \$15,100

TAYLOR, THOMAS N; ULTRASTRUCTURAL STUDIES OF CAR-EONIFEROUS SPORES (BOSOSI); 24 MONTHS \$33,000



SPIESS, ELIOT B; GENETIC BASIS OF MATING ACTIVITY IN NATURAL POPULATIONS OF DROSOPHILA (BOLHOS); 84 MONTHS \$43,000

#### UNIVERSITY OF ILLINOIS AT URBANA

PAYNE, WILLARD W; SYSTEMATICS AND EVOLUTION OF RAGWEEDS (800809) 008); 24 MONTHS \$30,800

PAYNE, WILLARD W; SYSTEMATIC STUDIES OF STOMATA (BOJOLY); 24 MONTHS \$30,700

LEVINE, NORMAN D; SYSTEMATICS OF APICOMPLEXAN C. SPOROZOAN') PROTOZOA (BOSOGOO KOO): 12 MONTHS \$30,000

PAYNE, WILLARD W. DOCTORAL DISSERTATION RESEARCH ON TAX-ONOMIC STUDIES OF ASTER (BOSIOS): 24 MONTHS \$1,900

DE WET, J M J; ORIGIN AND EVOLUTION OF CULTIVATED 'PEN-NISETUM' (BOJ3308); & MONTHS \$1,000

#### WESTERN ILLINGIS IINIVERSITY

SINGER, SAMUEL; ENTOMOGENOUS EFFECTS OF BACILLI FOR THE BIOLOGICAL CONTROL OF MOSQUITOES (BOSSIES); 24 MONTHS \$32,000

NORTHWESTERN UNIVERSITY-CHICAGO CAMPUS-MEDICAL SCHOOL
NADLER, CHARLES F; EVOLUTIONARY STUDIES OF HOLARCTIC
MAMMALS (BOSE114 X00); 12 MONTHS \$25,000

#### INDIANA

### INDIANA UNIVERSITY, BLOOMINGTON

DILCHER, DAVID L; THE EOCENE FLORAS OF SOUTHEASTERN NORTH AMERICA (B012805 001); 24 MONTHS \$30,000

FREY, DAVID G; LIMNOLOGY AND PLANKTON DYNAMICS OF A TROP-ICAL LAKE (B014034 001); 24 MONTHS \$17,000

NOLAN, VAL JR; DOCTORAL DISSERTATION RESEARCH-INFLUENCE OF VEGETATION AND TERRITORY ON AVIAN MATING SUCCESS (8031747); 24 MONTHS \$3,500

DILCHER, DAVID L; DOCTORAL DISSERTATION RESEARCH- EOCENE MICROFOSSIL FLORA (BOSISSE): 24 MONTHS \$1,900

#### PURDUE UNIVERSITY

BROERSMA, DELMAR B; DISSERTATION RESEARCH ON SYSTE-MATICS OF LEPTINOTARSA' (BOJOJOS); 24 MONTHS \$900

#### **IOWA**

#### IOWA STATE UNIVERSITY OF SCIENCE & TECHNOLOGY

LERSTEN, NELS R; ANATOMY OF BACTERIAL LEAF NODULES IN THE RUBIACEAE (BOJOSOI), 24 MONTHS \$18,000

POHL, RICHARD W; TAXONOMIC STUDIES ON THE GRASS FLORA OF CENTRAL AMERICA (BOJPOSS): 24 MONTHS \$30,800

### UNIVERSITY OF IOWA

DINGLE, HUGH; INSECT MIGRATION STRATEGIES (BOORTOS 001); 24 MONTHS \$48,000

### KANSAS

### KANSAS STATE UNIVERSITY

ROBEL, ROBERT J; PESTICIDE, PARASITE, ENERGETIC AND BEHAVIORAL INTERACTIONS (BOISOID 001); 24 MONTHS \$62,900

ANDERSON, LORAN C; SYSTEMATICS AND ANATOMY OF CHYSOTHAMNUS AND RELATED ASTERACEAE (BOSISSE X00); 12 MONTHS 281,700

#### UNIVERSITY OF KANSAS

JOHNSTON, RICHARD F; ADAPTIVE SIGNIFICANCE OF SIZE VARIA-TION IN NATURAL POPULATIONS (BOOSTS) 001); 12 MONTHS \$19,600

HOFFMAN, ROBERT S; COHERENT AREA GRANT IN EVOLUTIONARY BIOLOGY (BOOSTES 001); 10 MONTHS \$31,700

HOFFMANN, ROBERT S; SYSTEMATICS AND EVOLUTIONARY HISTO-RY OF THE MARMOTS (BO20131 X01); 12 MONTHS \$14,000

HALL, E RAYMOND; DOCTORAL DISSERTATION RESEARCH- EVOLU-TION OF THE GENUS 'CANIS' IN NORTH AMERICA (BOJOSOJ); 12 MONTHS \$1,000

BYERS, GEORGE W; EVOLUTIONARY HISTORY OF MECOPTERA (BOJOSJ7); 24 MONTHS \$24,800

HALL, E RAYMOND; CLASSIFICATION OF NORTH AMERICAN RECENT MAMMALS (BOJO969); 24 MONTHS \$40,000

MOORE, RAYMOND C, AND TEICHERT, CURT; TREATISE ON INVER-TEBRATE PALEONTOLOGY (BOJIJJI X00); 12 MONTHS \$66,600

#### LOUISIANA

#### LOUISIANA STATE UNIVERSITY MED CTR NEW ORLEANS

DESSAUER, HERBERT C; MOLECULAR DATA AND REPTILIAN SYSTE-MATICS (B007894 Xod): 12 MONTHS \$16.500

#### TULANE UNIVERSITY

WELDEN, A L; SYSTEMATICS OF THE STEREACEAE AND CULTURAL CHARACTERS OF TROPICAL AND SUBTROPICAL APHYLLOPHORALES (BOJLPOR XOO); 12 MONTHS \$10,000

## LOUISIANA STATE UNIVERSITY, BATON ROUGE-AGRICULTURAL EXPERIMENT STATION

HOLLIS, JOHN P, AND PATRICK, WILLIAM H; CHEMICAL BEHAVIOR AND BIOLOGICAL EFFECTS OF SULFIDE COMPOUNDS IN FLOODED SOILS, SWAMPS AND MARSHES (BORDES) XOI); 12 MONTHS \$22,000

#### TULANE UNIVERSITY-SCHOOL OF MEDICINE

ESSLINGER, JACK H; SYSTEMATICS OF THE FILARIAL PARASITES OF NEOTROPICAL MAMMALS (BOJOSTA); 24 MONTHS \$25,300

#### MARYLAND

#### CATONSVILLE COMMUNITY COLLEGE

KING, ROBERT M; A GENERIC ANALYSIS OF THE TRIBE EUPA-TORIEAE (COMPOSITAE) (BO00300 004); 6 MONTHS \$6,500

#### UNIVERSITY OF MARYLAND, COLLEGE PARK

HIGHTON, RICHARD; SYSTEMATIC STUDIES ON THE SALAMANDERS OF THE GENUS PLETHODON (BOISSE XOI): 12 MONTHS \$17,600

CORLISS, JOHN O; SYSTEMATICS AND EVOLUTION OF CILIATE PROTOZOA (BOSTOSO XOI); 12 MONTHS \$19,300

Highton, Richard; dissertation research ecological interactions of Salamanders (Bosoffi); 24 Months 14,500

STERN, WILLIAM L; COMPARATIVE ANATOMY AND SYSTEMATICS OF WOODY SAXIFRAGACEAE (BOSOSCO XOO), 12 MONTHS \$15,000

MORSE, DOUGLAS H; THE ROLES OF SOCIAL BEHAVIOR, RESOURCE SUPPLY, AND VEGETATION IN HABITAT UTILIZATION (BOSICOS); 24 MONTHS \$20,000

#### MASSACHUSETTS

#### AMHERST COLLEGE

FISHER, STUART G; METABOLISM OF THE FORT RIVER ECOSYSTEM, MASSACHUSETTS (BOJJ#17); 24 MONTHS \$35,000

#### BOSTON UNIVERSITY

HUMES, ARTHUR G; FARASITIC COPEPODA (CRUSTACEA) FROM IN-VERTEBRATES AND FISHES (BOOSJS) X01); 12 MONTHS \$21,200

#### HARVARD UNIVERSITY

WILLIAMS, ERNEST E; INTER AND INTRA-SPECIES DIFFERENCE AND INTERACTION IN NEW WORLD SAURIANS (B019801 X01): 12 MONTHS \$80,700

RUMMEL, BERNMARD; PROBLEM OF EXTINCTIONS AND THE EVOLU-TIONARY RADIATION OF LOWER TRIASSIC AMMONITES (BO2POJT X01); 12 MONTHS \$11,800

CROMPTON, ALFRED W; ORIGIN OF MAMMALS AND THE INTER-RELATIONSHIPS OF MESOZOIC MAMMALS (BOSOIZE): 24 MONTHS \$40,000 COHEN, JOEL E; MATHEMATICAL MODELS OF SELECTION AND IN-TERACTION AMONG POPULATIONS (BOJIOJE); 24 MONTHS \$28,000

CARPENTER, FRANK M; EVOLUTIONARY MORPHOLOGY OF THE LOCOMOTORY SYSTEM OF COLEOPTERA (BOJIITJ); 24 MONTHS \$30,000 PATTERSON, BRYAN; PLEISTOCENE MAMMALS OF NORTH AMERICA

(BOJ1287), 24 MONTHS \$40,000
PATTERSON, BRYAN; THE VERTEBRATE PALEONTOLOGY OF TROP!

PATTERSON, BRYAN; THE VERTEBRATE PALEONTOLOGY OF TROP! CAL SOUTH AMERICA (BOJE489 X00); 12 MONTHS \$15,000

### UNIVERSITY OF MASSACHUSETTS, AMHERST

BIERHORST, DAVID W; MORPHOLOGY AND PHYLOGENY OF FERNS (B013903 002); 24 MONTHS \$22,700

GALINAT, WALTON C; EVOLUTION OF THE AMERICAN MAYDEAE (BOISTST 001); 24 MONTHS \$37,900

KLEKOWSKI, EDWARD J JR; PTERIDOPHYTE GENETICS AND EVOLU-TION (BOJ1990); 24 MONTHS \$29,700

#### WILLIAMS COLLEGE

GRANT, WILLIAM C JR; PESTICIDE EFFECTS ON THE BEHAVIOR AND ECOLOGY OF HERMIT CRABS (BOJIS48); 36 MONTHS \$18,100

### HARVARD UNIVERSITY-HERBARIUM

ROLLINS, REED C; POPULATION DIVERSITY AND SPECIES DIF-FERENTIATION IN LEAVENWORTHIA (BOOJOIS); 24 MONTHS \$48,700

WOOD, CARROLL E JR; A GENERIC FLORA OF THE SOUTHEASTERN UNITED STATES (BOOG 459 XO3): 12 MONTHS \$44,700

NEVLING, LORIN 1 JR; FLORA OF VERACRUZ (BO20267 X01); 12 MONTHS \$33,800

TRYON, ROLLA M, AND TRYON, ALICE F; TAXONOMIC AND EVOLU-TIONARY STUDIES OF THE AMERICAN TREE FERNS (BOSITO); 24 MONTHS \$40,200

NEVLING, LORIN 1 JR; SUPPORT OF BOTANICAL SYSTEMATIC COL-LECTIONS AT HARVARD UNIVERSITY (BOSSESS X00); 12 MONTHS \$180,000

#### **MICHIGAN**

#### HOPE COLLEGE

BRADY, A' LEN R; ECOLOGY, DISTRIBUTION AND BEHAVIOR OF OX-YOPIDAE AND LYCOSIDAE (ARACHNIDA: ARANEAE) (B015925 001); 24 MONTHS \$19,000

### MICHIGAN STATE UNIVERSITY

MANNY, BRUCE A, AND WETZEL, ROBERT G; DISSOLVED ORGANIC NITROGEN IN LAKES (B028900 X01); 12 MONTHS \$31,600



LAUPP, GEORGE H; FRESHWATER ECOSYSTEMS (BOSIOIS X00); 12 MONTHS \$180,000

WOLK, COLEMAN P. DEVELOPMENT, FOR FIELD AND LABORATORY STUDIES, OF A GAS-CHROMATOGRAPHIC ASSAY FOR HETEROCYSTS (BOMMAS); 12 MONTHS \$16,800

LAUPP, GEORGE H; STRUCTURE AND STABILITY OF THE GULL LAKE ECOPLANKTON COMMUNITY (BOSSET); 30 MONTHS \$60,000

#### UNIVERSITY OF MICHIGAN

MILLER, ROBERT R; SYSTEMATICS AND EVOLUTION OF POECILID AND RELATED FISHES (BOOGATE XOS); 12 MONTHS \$18,300

HAIRSTON, NELSON G. GRADUATE TRAINING IN SYSTEMATIC AND EVOLUTIONARY BIOLOGY (BOSSESS COI); 10 MONTHS \$56,000

MCCULLOUGH, DALE R; DEER POPULATION-VEGETATION INTERAC-TIONS ON THE GEORGE RESERVE (BOSSESS X01); 12 MONTHS \$25,000

PAYNE, ROBERT B: POPULATION STRUCTURE AND EVOLUTIONARY RELATIONSHIPS IN AVIAN POPULATIONS (BORPOIT XOI); 12 MONTHS \$9,000

DAVIS, MARGARET B; DOCTORAL DISSERTATION RESEARCH IN EDAPHIC CONTROL OF VEGETATION (BOSO14); 12 MONTHS \$5,600 LOMMEN, PAUL W; PLANT PRODUCTIVITY AND BIOPHYSICAL ECOLOGY (BOSO14); 11 MONTHS \$72,200

ECOLOGY (BOSOSID); 11 MONTHS \$72,200

MACURDA, DONALD B JR; THE QUANTITATIVE PHYLETICS OF THE

PHYSETOCRINID CRINOIDS (BOSOSIS); 12 MONTHS \$6,000 WAGNER, WARREN H JR; EVOLUTIONARY CHARACTERS AND CLAS-SIFICATION OF THE FERNS (BOSOSIS X00); 12 MONTHS \$19,600

GANS, CARL: THE FUNCTIONAL MORPHOLOGY OF SQUAMATE REPTILIA (BOJIOJA X00): 12 MONTHS \$45,000

MCVAUGH, ROGERS; VASCULAR FLORA OF JALISCO (BOJIIJJ); 24 MON'THS \$19,400

HUBBELL, STEPHEN P; AGGRESSION AND ECOLOGICAL COMPETITION BETWEEN SYMPATRIC INSECTS (BOJJST); 24 MONTHS \$40,000

RHODES, F H T; OPERATIONAL SUPPORT FOR THE UNIVERSITY OF MICHIGAN BIOLOGICAL STATION (BOJITON), 16 MONTHS \$36,000

#### WAYNE STATE UNIVERSITY

GOODMAN, MORRIS; EFFECTS OF EVOLUTION ON PRIMATE MACROMOLECULES (BOO? 4M XOJ); 12 MONTHS \$23,000

COOK, DAVID R; WATER MITES FROM NORTH AND CENTRAL AMERICA (B012373 001); 24 MONTHS \$22,200

#### WAYNE STATE UNIVERSITY-SCHOOL OF MEDICINE

GOODMAN, MORRIS; MOLECULAR SYSTEMATICS OF THE PRIMATES (B015040 001): 12 MONTHS \$23,000

### MINNESOTA

### UNIVERSITY OF MINNESOTA

HALL, JOHN W; MEGASPORES OF CRETACEOUS HETEROSPOROUS FERNS (801404) 001); 24 MONTHS \$30,000

SHAPIRO, JOSEPH; KINETICS OF PHOSPHORUS AND NITROGEN UPTAKE AND GROWTH BY ALGAE AND BACTERIA (B013673 001); 24 MONTHS \$78,000

WETMONE, CLIFFORD M; THE ULYRASTRUCTURE OF NORTH AMERICAN HEPPIACEAE (BO28595 X01); 12 MONTHS \$9,100

BARNWELL, FRANKI.IN H; GENETIC DIFFERENCES BETWEEN TWIN SPECIES OF CRUSTACEANS (BOJ1034); 24 MONTHS \$40,300

#### MISSISSIPPI

### GULF COAST RESEARCH LABORATORIES

DAWSON, C E; SYSTEMATIC STUDIES OF THE FAMILIES DACTYLOSCOPIDAE AND GOBIIDAE (BOJIOSJ X00); 12 MONTHS \$8,500

#### MISSISSIPPI STATE UNIVERSITY

JACKSON, JEROME A; POPULATION BIOLOGY OF 'DENDROCOPOS BOREALIS' (BOJJ984): 24 MONTHS \$25,000

#### MISSOURI

### MISSOURI BOTANICAL GARDEN

RAVEN, PETER H. SUPPORT OF THE SYSTEMATIC COLLECTIONS AT THE MISSOURI BOTANICAL GARDEN (BOJ3793 XO)), 12 MONTHS \$120,000 CROAT, THOMAS B, ECOTAXONOMIC MANUAL FOR THE FLORA OF BARRO COLORADO ISLAND (BOJ3603), 24 MONTHS \$30,000

#### WASHINGTON UNIVERSITY

SEXTON, OWEN J; AN EXPERIMENTAL INVESTIGATION OF PREDA-TOR SEARCHING IMAGE AND PREY COLOR PATTERN POLYMORPHISM (BAJ0140 X00); 12 MONTHS \$27,900

STALKER. HARRISON D; GENETIC POLYMORPHISM IN NATURAL POPULATIONS OF DROSOPHILA (BOJIOJO); 24 MONTHS \$60,000

LEWIS, WALTER H; DOCTORAL DISSERTATION RESEARCH-EVOLU-TION AND CHROMOSOMAL V/RIATION IN 'CLINTONIA (LILIACEAE') (Bassies); 24 MONTHS \$2,000

#### MONTANA

### MONTANA STATE UNIVERSITY

PICKETT, JAMES M; CHEMOSTAT STUDIES OF NUTRIENT-LIMITED ALGA GROWTH (BOJ1466); 24 MONTHS \$23,900

#### UNIVERSITY OF MONTANA

MILLER, CHARLES N; STRUCTURALLY-PRESERVED CONIFER CONES FROM NORTH AMERICA (BOISTST 001); 24 MONTHS \$34,000

#### NEBRASKA

#### CREIGHTON UNIVERSITY

ANDREWS, RICHARD V; COMPARATIVE ANALYSIS OF HYPOPHYSBAL AND STEROID FACTORS RELATED TO POPULATION DYNAMICS (BOSISSO); 24 MONTHS \$35,000

#### UNIVERSITY OF NEBRASKA AT LINCOLN

KAUL, ROBERT B; DIAPHRAGMS IN AQUATIC PLANTS (BOSISSO); 24 MONTHS \$27,000

#### **NEW HAMPSHIRE**

#### DARTMOUTH COLLEGE

GILBERT, JOHN J; SEXUALITY IN THE ROTIFER ASPLANCHNA (BOJ 1839); 24 MONTHS \$48,000

### NEW JERSEY

#### PRINCETON UNIVERSITY

WILLIS, EDWIN O; BEHAVIORAL AND POPULATION STUDIES OF FORMICARIDAE (BOSO776); 7 MONTHS \$6,800

MACARTHUR, ROBERT, AND WILLIS, EDWIN O; ECOLOGICAL AND BEHAVIORAL STUDIES OF INSECTIVOROUS BIRDS (BOSSESS); 24 MONTHS \$40,000

#### RUTGERS UNIVERSITY

FAIRBROTHERS, DAVID E; CHEMOSYSTEMATICS OF MENTHA AND CORNALES (801)202 001); 24 MONTHS \$33,300 LECHEVALIER, HUBERT; COMPARATIVE MORPHOLOGY AND

CHEMISTRY OF ACTINOMYCETES (BOILTOS GOI); 24 MONTHS \$40,000
PEARSON, PAUL G; DOCTORAL DISSERTATION RESEARCH. THE
ECOLOGICAL IMPACT OF AN AERIAL APPLICATION OF THE PESTICIDE, SEVIN, ON NON-TARGET ORGANISMS IN A FOREST ECOSYSTEM
(BOSILLOS); 12 MONTHS \$1,000

### NEW MEXICO

#### UNIVERSITY OF NEW MEXICO

DEGENHARDT, W G; DOCTORAL DISSERTATION RESEARCH IN CHEMOSYSTEMATICS (BOSOISI); 18 MONTHS \$1,600 CRAWFORD, CLIFFORD S; COLD-HARDINESS DEVELOPMENT IN CEN-

TIPEDES AND SCORPIONS (BOJ1604); 24 MONTHS \$30,000

ROSENZWEIG, MICHAEL L; PERTURBATION ANALYSIS OF DESERT RODENT COMMUNITIES (BOJISO4); 24 MONTHS \$26,400

### NEW YORK

## ADELPHI UNIVERSITY

WEST, ROBERT M: PALEOFAUNAL STUDIES OF THE MIDDLE EOCENE BRIDGER FORMATION OF SOUTHWESTERN WYOMING (BOPOZES CO1); 24 MONTHS \$24,000

### AMERICAN MUSEUM OF NATURAL HISTORY

TEDFORD, RICHARD H; CENOZOIC MAMMALS (B018274 X01); 12 MONTHS \$24,000

STUNKARD, HORACE W; STUDIES ON HELMINTHIC PARASITES (BOJO663): 24 MONTHS \$15,900

ROZEN, JEROME G JR; EVOLUTIONARY RELATIONSHIPS AND HIGHER CLASSIFICATION OF BEES (BOJZIDJ X00); 12 MONTHS \$25,000

VAN GELDER, RICHARD G; OPERATION SUPPORT FOR THE MAM-MALOGY COLLECTION (BOJJS71 X00); 12 MONTHS \$57,200 SCHAEFFER, BOBB; IMPROVES ACCESS AND UTILITY OF FOSSIL

SCHAEFFER, BOBB; IMPROVES ACCESS AND UTILITY OF FOSSIL MAMMAL COLLECTIONS (BOJJSES X00), 12 MONTHS \$100,500

AMADON, DEAN; SUPPORT OF COLLECTION-BASED ACTIVITIES IN ORNITHOLOGY (BOJJEJE X00); 12 MONTHS \$70,700

### COLUMBIA UNIVERSITY

BOCK, WALTER J; EVOLUTION OF THE AVIAN FEEDING APPARATUS (BOOSSOS XOS); 12 MONTHS \$24,000

MCKENNA, MALCOLM C; DOCTORAL DISSERTATION RESEARCH. NORTH AMERICAN MIOCENE AND PLIOCENE CHALICOTHERES (BOJJ196); 12 MONTHS \$1,000

#### CORNELL UNIVERSITY

POUGH, F HARVEY; ENVIRONMENTAL ADAPTATIONS IN THE BLOOD OF AMPHIBIANS AND REPTILES (BOISSES 001); 24 MONTHS \$30,000

MOORE, HAROLD E: STUDIES TOWARD A GENERA PALMARUM (BOROLIS XOI); 11 MONTHS \$42,900

BRADBURY, JACK W; DOCTORAL DISSERTATION RESEARCH- THE ADAPTIVE SIGNIFICANCE OF SOCIAL BEHAVIOR IN NEOTROPICAL BATS (BOJO254); 12 MONTHS \$2,900

EISNER, THOMAS; DOCTORAL DISSERTATION - COMPARATIVE ETHOLOGY AND ECOLOGY OF TROPICAL FOREST SCIURIDAE (BOSOSEI); 24 MONTHS \$2,500

WHITTAKER, ROBERT H; COMMUNITY FUNCTION AND GRADIENT ANALYSIS (B030679); 24 MONTHS \$80,300



BATES, DAVID M; STUDIES IN THE NORTH AMERICAN MALVACEAE (BOSOS 42 X00): 12 MONTHS \$12,000

LIKENS, GENE: HYDROLOGIC NUTRIENT CYCLE INTERACTION IN UNDISTURBED AND MANIPULATED FOREST ECOSYSTEMS (ECOSIST X00); 12 MONTHS \$108,100

CADE, THOMAS J: ETHOLOGY AND ECOLOGY OF FALCONS AND

OTHER RAPTORS (BOS1547); 24 MONTHS \$45,300

BROWN, WILLIAM L JR; RECLASSIFICATION OF THE FORMICIDAE (Bostess X00); 12 MONTHS \$12,300

BERG, CLIFFORD O; BIOLOGY OF THE SCIOMYZIDAE (BOSESIT X00); 12 MONTHS \$20,000

FEENY, PAUL P. COMPARATIVE ENERGETICS, POPULATION, AND CHEMICAL ECOLOGY OF HERBIVOROUS INSECTS (BOSSISS): 24 MONTHS \$40,000

#### HUNTER COLLEGE

HASCHEMEYER, AUDREY E; CONTROL OF PROTEIN SYNTHESIS IN TEMPERATURE ACCLIMATION OF MARINE ORGANISMS (BOILSTO GOI); 24 MONTHS \$32,000

#### NEW YORK BOTANICAL GARDEN

HOLMGREN, PATRICIA; OPERATIONAL SUPPORT OF A RESEARCH

FACILITY (BORYARE XOI); 12 MONTHS \$99,400

Pi DUMONT. KENT MONOGRAPHIC STUDIES IN THE SCLEROTINIACEAE AND OTHER RELATED DISCOMYCETES (BOYSSES 001); 12 MONTHS \$15,000

MICKEL, JOHN T: PTERIDOPHYTE FLORA OF THE STATE OF OAX. ACA, MEXICO (Bojossa X00); 12 Months \$16,900

HOLMGREN, NOEL H; VASCULAR PLANTS OF THE INTERMOUNTAIN

WEST (B030814); 24 MONTHS 456,000 IRWIN, HOWARD S; REVISION OF THE GENUS DECLIEUXIA (RU-BIACEAC) DOCTORAL DISSERTATION RESEARCH (BOJISTS), 12 MONTHS

\$2,200 STEERE, WILLIAM C; ARCTIC AMERICAN MOSSES (BOJEOG XOO); 12

MONTHS \$31,000 KOYAMA, TETSUO; TROPICAL AMERICAN CYPERACEAE (BOJEOSE

X00), 12 MONTHS \$20,000

PRANCE, CHILLEAN T; A PLANT SURVEY OF BRAZILIAN AMAZONIA (Boses 3 X00); 12 MONTHS \$11,900

#### NEW YORK UNIVERSITY

HAPP, GEORGE M, AND UNDERWOOD, GRAHAM; SYMBIOTIC INTERACTION BETWEEN BARK BEETLE AND FUNGUS (B01950) X01); 12 MONTHS \$26,200

PERLMUTTER, ALFRED; ENVIRONMENT RELATED TO DISEASE RE-

SISTANCE OF FISHES (BOJ1447); 24 MONTHS \$62,000

#### STATE UNIVERSITY AT BINGHAMTON

GRIERSON, JAMES D. AND BONAMO, PATRICIA M; PALEOBOTANICAL STUDY OF THE DEVONIAN-MISSISSIPPIAN TRANSITION FLORA OF THE CATSKILL DELTA (BOIJOSE 001); 24 MONTHS \$41,700

### STATE UNIVERSITY AT BUFFALO

PATTEE, HOWARD H; PRIMEVAL ECOSYSTEM - THE DYNAMICS OF PHYSICAL AND INFORMATIONAL NETWORKS AT THE ORIGIN OF LIFE (BOJJ478); 18 MONTHS \$12,000

## STATE UNIVERSITY AT STONY BROOK

SOKAL, ROBERT R; ECOGENETIC PROCESSES IN LABORATORY IN-SECT POPULATIONS (BOIS146 001); 24 MONTHS \$69,900

FUTUYMA, DOUGLAS J; DOCTORAL DISSERTATION- ARTHROPOD COMMUNITIES ASSOCIATED WITH THE INFLORESCENCES OF HELICONIA (BOJOSIJ); 12 MONTHS \$2,900

#### **NORTH CAROLINA**

### DUKE UNIVERSITY

STONE, DONALD E; SYSTEMATIC STUDIES ON THE JUGLANDACEAE (B028523 X01); 12 MONTHS \$13,000

KRAMER, PAUL J; CONFERENCE ON THE USE OF PHYTOTRONS FOR RESEARCH IN ENVIRONMENTAL PHYSIOLOGY (BOJI286); 12 MONTHS \$6,100

LIVINGSTONE, DANIEL A; DYNAMICS OF PRODUCTIVITY IN TROP! CAL AFRICAN LAKES (BOJJJIU X00); 12 MONTHS \$100,000

BILLINGS, W D; DOCTORAL DISSERTATION RESEARCH - ECOLOGY OF ESPELETIA' IN THE VENEZUELAN HIGH ANDES (BOJ (882); 18 MONTHS \$4,000

### UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

RADFORD, ALBERT E: VASCULAR FLORA OF THE SOUTHEASTERN UNITED STATES (BOOSSOS 002); 12 MONTHS \$18,500

PARKS. CLIFFORD R; CHEMOTAXONOMIC ANALYSIS OF VARIATION PATTERNS IN THE AMPHIDIPLOID COTTONS (BOSO780); 24 MONTHS \$30,000

STIVEN, ALAN E; PCPULATION STUDIES OF GASTROPOD HER-BIVORE - DETRITUS SYSTEMS (BOJOSSS), 24 MONTHS \$50,000

#### **WESTERN CAROLINA UNIVERSITY**

COYLE, FREDERICK A; SYSTEMATICS AND NATURAL HISTORY OF THE SPIDER GENUS 'ALIATYPUS' (BOJJIZE); 24 MONTHS \$12,200

#### DUKE UNIVERSITY-MARINE LABORATORY

SULLIVAN, J BOLLING; STRUCTURE-FUNCTION AND EVOLUTION OF HEMOCYANINS (BOJIFFI); 24 MONTHS \$56,000

#### university of north Carolina at Chapel Hill-Institute of FISHERIES RESEARCH

SCHWARTZ, FRANK J; DISSERTATION RESEARCH- SYSTEMATICS AND COMPARATIVE BIOLOGY OF THE GENUS DIPLECTRUM (PISCES) (Bos (\$90); 12 MONTHS \$1,800

#### OHIO

#### MIAMI UNIVERSITY

ESHBAUGH, W HARDY, BIOSYSTEMATICS AND EVOLUTION OF THE 'CAPSICUM PUBESCENS' COMPLEX (BOJIBJE); 24 MONTHS \$17.300

#### OBERLIN COLLEGE

BENZING, DAVID H; ECOLOGY AND ADAPTIVE BIOLOGY OF AN AT. MOSPHERIC BROMELIAD (B008780 001); 24 MONTHS \$21,000

#### OHIO STATE UNIVERSITY

COLINVAUX, PAUL A; ECOLOGICAL STUDIES OF THE GALAPAGOS ISLANDS (BORROGS XOI); 12 MONTHS \$31,900

MACIOR, LAZARUS W; DYNAMICS OF INSECT-MEDIATED BREEDING SYSTEMS IN ANOIOSPERMS (BÖLDIGO XOI); 12 MONTHS \$15,400

STUESSY, TOD F; DISSERTATION RESEARCH ON SYSTEMATICS OF 'Galinsoga' and 'Pectis' (Bojong); 30 Months \$5,000

MOMOT, WALTER T; POPULATION DYNAMICS AND PRODUCTIVITY NATURAL POPULATIONS OF ORCONECTES VIRILIS HAGEN (BO:18197); 24 MONTHS \$18,000

#### OKLAHOMA

#### UNIVERSITY OF OKLAHOMA

SCHNELL, GARY D; AN ANALYSIS OF THE COYARIANCE OF PAT-TERNS OF GENIC AND MORPHOLOGIC VARIATION IN NATURAL POPU-LATIONS (BOJOSI4); 12 MONTHS \$18,200

SCHNELL, GARY: DOCTORAL DISSERTATION RESEARCH- SYSTE. MATICS AND ECOLOGY OF KANGAROO RATS (BOJJOSI); 12 MONTHS \$3,600

#### OREGON

#### OREGON STATE UNIVERSITY

OMAN, PAUL; PHYLOGENY AND DISTRIBUTION OF NEARCTIC AND PALEARCTIC LEAFHOPPERS (BOX8797 001); 12 MONTHS \$10,600

DAWSON, PETER S. EVOLUTION OF COMPETITIVE ABILITY (BOJOSES); 24 MONTHS \$28,000

RITCHER, PAUL O; SYSTEMATICS OF SCARABABID LARVAE AND ADULTS (B031129); 24 MONTHS \$38,000

### UNIVERSITY OF OREGON - EUGENE

CASTENHOLZ, RICHARD W; ECOLOGY AND PHYSIOLOGY OF PHOTOSYNTHETIC MICROORGANISMS OF HOT SPRINGS (BOJIELE XOO); 12 MONTHS \$38,000

#### PENNSYLVANIA

### ACADEMY OF NATURAL SCIENCE OF PHILADELPHIA

DROUET. FRANCIS; REVISION OF THE NOSTOCACEAE WITH TORU. LOSE IRICHOMES (B018545 001); 24 MONTHS \$34,200

GOULDEN, CLYDE E; EFFECTS OF MIDGE PREDATION ON ABUNDANCE AND DIVERSITY OF CHYDORID CLADOCERA (B028707 X01); 12 MONTHS \$25,000

RENTZ, DAVID C; A GENERIC REVISION OF THE SHIELD-BACKED KATYDIDS OF THE WORLD (BOJIO44); 24 MONTHS \$22,200

ROBACK, SELWYN S; THE IMMATURE CHIRONOMIDAE (BOJ2069 X00); 12 MONTHS \$17.000

ROBERTSON, ROBERT, AND DAVIS, GEORGE M; CURATION, IMPROVE-MENT AND SERVICE FUNCTIONS OF A MAJOR SYSTEMATIC COLLEC-TION OF RECENT MOLLUSKS (BOJS796 XOO); 12 MONTHS \$26,200

SCHUYLER, ALFRED E, AND MEARS, JAMES A; CARE AND MAIN-TENANCE OF THE ACADEMY HERBARIUM (BOSSIFF X00); 12 MONTHS \$46,700

BOHLKE, JAYES E; CURATING THE ACADEMYS FISH COLLECTION (B013885 X00); 12 MONTHS \$48,000

#### CARNEGIE INSTITUTE

DAWSON, MARY R, AND BLACK, CRAIG C; EVOLUTION AND PALEOECOLOGY OF LATE ECCENE AND OLIGOCENE MAMMALS (Bojos & X00) 12 MONTHS \$9,700

#### CARNEGIE-MELLON UNIVERSITY

GUILDAY, JOHN E; PLEISTOCENE FAUNAS OF THE APPALACHIAN KARST REGION (B018706 X01), 12 MONTHS \$7,500

#### SWARTHMORE COLLEGE

WEBER, NEAL A; ECOLOGICAL STUDY OF ATTINE ANTS (BOJ1131); 24 MONTHS \$14,000

#### UNIVERSITY OF PENNSYLVANIA

RICKLEFS, ROBERT E; THE NATURE OF ADAPTATION (BOSISSE X00); 12 MONTHS \$40,000

LI, HUI-LIN; A FLORA OF TAIWAN (BOJGOT); 24 MONTHS \$41,000



#### UNIVERSITY OF PITTSBURGH

COWGILL, U M; GEOCHEMICAL AND MINERALOGICAL HISTORY OF THE HULEH BASIN (BOOSISI COL): 24 MONTHS \$68,000

#### **RHODE ISLAND**

#### BROWN UNIVERSITY

DICK, ESTHER A; STUDIES IN THE GENUS LECCINUM (BOSINOS); 12 MONTHS \$3,500

#### SOUTH DAKOTA

#### SOUTH DAKOTA STATE UNIVERSITY

GREICHUS, YVONNE A: EFFECTS OF POLYCHLORINATED BIPHEN-YLS AND POT ON PELITANS (BOISTEL 001); 24 MONTHS \$12,000

### University of tennessee, knoxville

SHARP, AARON J: DOCTORAL DISSERTATION RESEARCH- AN ECO! XICAL STUDY OF MOSSES (BOJO073); 16 MONTHS \$1,800

PETERSEN, RONALD H; THE GENUS 'RAMAPIA' IN NORTH AMERICA (B011104); 24 MONTHS \$21,500

EVANS, A MURRAY; DOCTORAL DISSERTATION RESEARCH. REVI-SIONS IN GENUS 'HETEROTHECA' (BOJJOSI), 12 MONTHS \$800

#### TEXAS

#### RICE UNIVERSITY

THOMPSON, JAMES R: A MATHEMATICAL MODELLING APPROACH TO MOSQUITO CONTROL (BOSISSE); 12 MONTHS \$25,000

### SOUTHERN METHODIST UNIVERSITY

SLAUGHTER, BOB H; RECOVERY AND STUDY OF TESTIARY MICROVERTEBRATE REMAINS FROM THE GULF COASTAL PLAIN (Borsses Xo1); 12 MONTHS \$9,000

#### TEXAS A & M UNIVERSITY

SCHAFFNER, JOSEPH C: DISSERTATION RESEARCH. A SYSTEMATIC REVISION OF THE GENUS ZELUS (HEMIPTERA) (BOST866); 6 MONTHS

SCHAFFNER, JOSEPH C: DISSERTATION RESEARCH- A SYSTEMATIC REVISION OF THE GENUS ZELUS (HEMIPTERA) (BOJ1866 001); \$200

#### TRXAS TECH UNIVERSITY

BAKER, ROBERT J; KARYOTYPIC STUDIES OF PHYLLOSTOMATIDAE (B022144 X01), 12 MONTHS \$4,000

### UNIV OF TEX MD ANDREN HOSP & TUM INST AT HUSTN

HSU, TAO CHIUH; DNA HOMOLOGY BETWEEN RELATED MAM-MALIAN SPECIES (BOIJSSI 001); 24 MONTHS \$42,000

ALEXOPOULOS, CONSTANTINE; EXPERIMENTAL APPROACH TO THE TAXONOMY OF THE SLIME MOLDS (MYXOMYCETES) (BOOGSI2 XOJ); \$18,700

BOLD, HAROLD C; TAXONOMIC STUDIES OF ALGAE (B007887 X02); 12 MONTHS \$13,500

TURNER, B L; DOCTORAL DISSERTATION RESEARCH- NORTH AMER-ICAN SOUTH AMERICAN DESERT DISJUNCTS IN HYMENOXYS (B030230); 12 MONTHS \$1,900

JOHNSTON, MARSHALL C; FLORA OF THE CHIHUAHUAN DESERT

(B0J0861); 24 MONTHS \$46,900

PIANKA, ERIC R; A COMPARISON OF THREE INDEPENDENTLY EVOLVED ECOLOGICAL SYSTEMS (BOSICOS); 24 MONTHS \$25,000

TURNER, B L, AND FLAKE, R H; PUTATIVE ALLOPATRIC IN-TROGRESSION INVOLVING JUNIPERUS (BOJIO43); 24 MONTHS \$43,200

MABRY, T J; DISSERTATION RESEARCH- BIOCHEMICAL SYSTE-MATICS OF 'PARTHENIUM' (COMPOSITAE) (BOJ4121); 12 MONTHS \$2,000 COLE, GARRY T; EXPERIMENTAL-TAXONOMIC STUDIES OF HYPHO-

MYCETES (89/1/1/0): 24 MONTHS \$27,000

UNIV OF TEXAS MEDICAL SCHOOL AT SAN ANTONIO CAMERON, IVAN L: TOXICITY BIOASSAY FOR WATER POLLUTANTS (BOJ1580); 12 MONTHS \$19,900

### UNIV OF TBXAS SCH OF PUBLIC HEALTH AT HUSTN

HACKER, CARL S: A MATHEMATICAL MODELING APPROACH TO MOSQUITO CONTROL (BOJJEES): 12 MONTHS \$20,000

#### TBXAS A & M UNIVERSITY-TEXAS AGRICULTURAL EXPERIMENT STATION

GOULD, FRANK W; SYSTEMATIC GRASS STUDIES AT THE KEW HER-BARIUM (BOSTOUS), 12 MONTHS \$1,350

### UTAH

#### BRIGHAM YOUNG UNIVERSITY

WOOD, STEPHEN L: A TAXONOMIC MONOGRAPH OF THE BARK AND AMBROSIA BEETLES (B012147 001); 24 MONTHS \$30,000

WEBER, DARPELL J. ANDERSEN, W R. HESS, W M. AND VERNON, L P. EFFECT OF SALINITY ON CELL ORGANELLES AND THE PHOTOSYNTHETIC PROCESS IN HALOPHYTES (BOJIOST); 24 MONTHS #30,000

#### UNIVERSITY OF UTAH

ROBISON, RICHARD A: AGNOSTID TRILOBITES OF NORTH AMERICA (B008745 001); 24 MONTHS \$32,000

WIENS, DELBERT; MONOGRAPHIC STUDIES ON LORANTHACEAE

AND VISCACEAE (BOTTET COS); \$3,600

GAUFIN, ARDEN R; ECOLOGY OF STONEFLIES (PLECOPTERA) OF
THE INTERMOUNTAIN REGION (BUSEISS); 24 MONTHS \$16,700

#### UTAH STATE UNIVERSITY

SKUJINS, JOHN J; SYMPOSIUM ON ENVIRONMENTAL BIOGEOCHEMISTRY (BOSISIS); 24 MONTHS \$7,000

#### WINDHAM COLLEGE

TSENG, CHARLES C: COMPARATIVE PALYNOLOGICAL STUDIES IN ARALIACEAE (BOJI288); 24 MONTHS \$13,400

TSENG, CHARLES C: COMPARATIVE PALYNOLOGICAL STUDIES IN ARALIACEAE (BOJ1288 001); \$8,100

#### VIEGINIA

#### ROANOKE COLLEGE

JENKINS, ROBERT E: STUDIES OF THE CATOSTOMID FISHES (BOSIOSS); 24 MONTHS \$9,400

### UNIVERSITY OF VIRGINIA

KELLY, MAHLON G; STREAM EUTROPHICATION INDICES FROM FIELD MEASURED AND SIMULATED BIOLOGICAL ENERGY BUDGETS (BOJ2914); 24 MONTHS \$24,100

#### VIRGINIA POLYTECHNIC INSTITUTE

KOSZTARAB, MICHAEL; SYSTEMATIC STUDY OF SCALE INSECTS (B006885 X0J); 12 MONTHS \$16,600

#### WASHINGTON

#### UNIVERSITY OF WASHINGTON

TSUKADA, MATSUO; PAST VEGETATION AND DYNAMICS OF LAKE ECOSYSTEMS (8013300 001); 24 MONTHS \$72,000

EDMONDSON, W T. ORIANS, G H, PAINE, R T, KOHN, A J, AND PAUL-SON, DR; GRADUATE STUDENT RESEARCH AND TRAINING IN ECOLO-OY (BOSOS 78 001); 9 MONTHS \$25,000

GARA, ROBERT I, AND HRUTFIORD, BJORN F; FLIGHT AND HOST SELECTION BEHAVIOR OF THE MAHOGANY SHOOT BORER (BO20112 X01); 12 MONTHS \$10,000

STALEY, JAMES T; BIOLOGY OF PROSTHECATE BACTERIA (BOJOJIJ); 18 MONTHS \$17,500 ORIANS, GORDON H; CONFERENCE ON ECOSYSTEM STABILITY

(B030522), 6 MONTHS \$1,200

KOHN, ALAN J; DOCTORAL DISSERTATION RESEARCH - ECOLOGY OF PREDATORY GASTROPODS AND THEIR PREY (BOJO777); 24 MONTHS \$2,400

HASKINS, EDWARD F: LIFE HISTORY OF THE MYXOMYCETE 'ECHIN-OSTELIUM' (BW1444); 24 MONTHS \$25,000

PAINE, ROBERT T: DOCTORAL DISSERTATION RESEARCH . COEX-ISTENCE IN SYMPATRIC HERMIT CRABS (BOJISJ6); 24 MONTHS \$5,100 KOHN, ALAN J; INDO-WEST PACIFIC MARINE MOLLUSKS OF THE

FAMILY CONIDAE (BOJ2103 X00); 12 MONTHS \$22,000 KOHN, ALAN J; INDO-WEST PACIFIC MARINE MULLUSKS OF THE FAMILY CONIDAE (BOSSIOS XOI); \$3,875

PAINE, ROBERT T; EFFECTS OF AN INTRODUCED PREDATOR ON A

TROPICAL LAKE ECOSYSTEM (BOJJIPE); 24 NONTHS \$90,000 ORIANS, GORDON H; DOCTORAL DISSERTATION RESEARCH. BIRD

COMMUNITY STRUCTURE IN ALDER FORESTS (BOLISSS); 6 MONTHS

#### WASHINGTON STATE UNIVERSITY

BERRYMAN, ALAN A. AND PIENAAR, LEON V; COMPUTER SIMULA. TION OF POPULATION DYNAMICS OF SCOLYTUS VENTRALIS INFEST. ING ABIES GRANDIS (BOJO752); 24 MONTHS \$36,200

AKRE, ROGER D; THE BIOLOGY AND BEHAVIOR OF INSECT PREDA-TORS (B030922): 24 MONTHS \$17.300

### WISCONSIN

#### LAWRENCE UNIVERSITY

YOUNG, ALLEN M; ECOLOGICAL STUDIES OF NEOTROPICAL CICADAS (B013060); 36 MONTHS \$42,500

### UNIVERSITY OF WISCONSIN, MADISON

SENN, HAROLD A; OPERATION OF THE BIOTRON (BOOLITI 005); 24 MONTHS \$345,000

EVERT, RAY F: COMPARATIVE STRUCTURE OF THE PHLOEM IN

LOWER VASCULAR PLANTS (BOOSISS 001): 24 MONTHS \$50,000
KEITH, LLOYD B; ANALYSES OF CERTAIN POPULATION
PHENOMENA DURING A CYCLIC PEAK OF SNOWSHOE HARES (B0184)1 00/); 12 MONTHS \$8,000

MAGNUSON, JOHN J; BEHAVIOR AND SURVIYAL OF FRESHWATER FISHES EXPOSED TO SEVERE OXYGEN DEPLETION (BOISERS 001); 12 MONTHS \$20,000



BROCK, THOMAS D; MICROBIAL ECOLOGY OF THERMAL ENVIRON-MENTS (8010074); 12 MONTHS \$27,800

NITCHELL, JOHN E: EFFECT OF SOIL ABRATION ON ROOT EXUDA-TION AND FUNGAL DETERIORATION OF ROOT TISSUE (BOJOSES); 24 MONTHS \$48,000

PORTER, W P. MITCHELL, J W. AND BECKMAN, W A: ENERGY MICROMETEOROLOGY AND PREDATOR PREY INTERAC-BUDGETS, TIONS (BOSTOLIS), 12 MONTHS \$35,000

THOMSON, JOHN W; STUDIES ON AMERICAN ARCTIC LICHENS (BOS1115 X00); 12 MONTHS \$8,300

HASLER, ARTHUR D; LIMNOLOGICAL INTERACTIONS STRESSING TEMPERATURE EFFECTS (BOJ1678); 24 MONTHS \$60,400

STAIRS, GERALD R: DNA SEQUENCE IN SELECTED POPULATIONS OF 'PINUS BANKSIANA' (BOJFOFF); 24 MONTHS \$26,900

FITCH, WALTER M; SPECIAL APPROACHES TO THE STUDY OF EVOLUTIONARY RELATIONSHIPS (BOJESTA X00°); 12 MONTHS \$33,000 REITH, LLOYD B; POPULATION DYNAMICS IN A SNOWSHOE HARE

DECLINE (BOJJJ10 X00); 12 MONTHS \$31,000 HASLER, ARTHUR D. WORKSHOP ON ECOLOGICAL RESEARCH PRI-

ORITIES IN THE TROPICS (C138000); 15 MONTHS \$79,084 HASLER, ARTHUR D; SUPPORT FOR INTERNATIONAL ASSOCIATION FOR ECOLOGY (FORETER XOI\*): 12 MONTHS \$3,060

#### WYOMING

### UNIVERSITY OF WYOMING

LAVIGNE, ROBERT J; COMPARATIVE BEHAVIOR OF THE DIPTERAN FAMILY ASILIDAE (BOSSET XOI): 12 MONTHS \$10,300

CRAWFORD, DANIEL J; SYSTEMATIC STUDIES ON WESTERN NORTH AMERICAN SPECIES OF 'CHENOPODIUM' (BOISTES XOI); 12 MONTHS

BOYD, DONALD W. AND NEWELL, NORMAN D; PERMIAN BIVALVE MOLLUSCS FROM THE WESTERN UNITED STATES (BO30795); 24 MONTHS \$28,000

REEDER, JOHN R. AND CRAWFORD, DANIEL J; DOCTORAL DISSER-TATION RESEARCH- A BIOSYSTEMATIC STUDY OF 'SALIX' SECTIONS 'CORDATAB' AND 'COMMUTATAE' (BOJJ470); 24 MONTHS \$4,200

### PHYSIOLOGICAL PROCESSES

UNIVERSITY OF ALABAMA IN BIRMINGHAM

HIRAMOTO, RAYMOND N: CELLULAR ANTIBODY RESPONSE (BOISBOA 002): 12 MONTHS \$15,000

SACHS, GEORGE, AND SHOEMAKER, R L; MICROELECTRODE STU-DIES OF NECTURUS GASTRIC MUCOSA (BOJ1073); 24 MONTHS \$40,000

TUSKEGEE INSTITUTE-GEORGE WASHINGTON CARVER FOUNDATION HENDERSON, JAMES H M; ISOENZYMOUS NATURE OF IAA-OXIDASE FROM THE COLEOPTILES OF AVENA (BOJOSSE): 24 MONTHS \$12,200

TUSKEGEE INSTITUTE SCHOOL OF VETERINARY MEDICINE

SIDDIQUE, IRTAZA H: STUDIES ON THE PATHOGENESIS OF LISTERI-AL INFECTIONS (BOISSES OOI): 24 MONTHS \$25,300 VERMA. O P, AND WALKER, C A: IN VIVO STUDIES ON THE AVIAN

OVIDUCT MOTILITY (BOJASJI); 24 MONTHS \$25,000

#### ARIZONA

ARIZONA STATE UNIVERSITY

REEVES, HENRY C; PHYSICO-CHEMICAL STUDIES OF NADP ISOCITRATE DEHYDROGENASE (BOIE265 001); 24 MONTHS \$45,000

UNIVERSITY OF ARIZONA

JENSEN, RICHARD G; CONTROL OF CELLULAR PROCESSES DURING PHOTOSYNTHESIS (8027454 001); 24 MONTHS \$27,000

UNIVERSITY OF ARIZONA-COLLEGE OF MEDICINE

DANTZLER, WILLIAM H; EXCRETORY FUNCTION IN VERTEBRATES (B028692 X01): 12 MONTHS \$15,700

MILOS, PHYLOGENY OF PROTOCOLLAGEN PROLINE HYDROXYLASE (BOSSOZE); 24 MONTHS \$45,000

#### **ARKANSAS**

UNIVERSITY OF ARKANSAS-UNIVERSITY OF ARKANSAS MEDICAL CENTER

WADKINS. CHARLES L: OXIDATIVE PHOSPHORYLATION STUDIES

(B015383 001); 24 MONTHS \$55,000 PAULY, JOHN E, AND SCHEVING, LAWRENCE E: INTERNATIONAL MEETING OF THE SOCIETY FOR THE STUDY OF BIOLOGICAL RHYTHMS (B030401): 18 MONTHS \$1,200

SMITH. W GRADY; AMINO ACID METABOLISM IN BACTERIA (BOJJ906 X00); 12 MONTHS \$24,000

#### CALIFORNIA

CALIFORNIA INSTITUTE OF TECHNOLOGY

WIERSMA. C A G; NERVOUS SYSTEM OF CRUSTACEANS AND OTHER ARTHROPODS (BOOGS)1 XOJ); 12 MONTHS \$41,800

#### CALIFORNIA STATE UNIVERSITY, LOS ANGELES

ANDREOLI, ANTHONY J: STUDY OF ENSYME PATTERNS IN BACIL-LUS MEGATERIUM' DURING SPORULATION (BOISTES 801); \$2,600

#### CITY OF HOPE MEDICAL CENTER

LEVINE, RACHMIEL; MECHANISMS UNDERLYING THE ANABOLIC EFFECTS OF INSULIN (BOJOSIO); 24 MONTHS \$56,200

#### OCCIDENTAL COLLEGE

MORTON, MARTIN L: ANNUAL CYCLE OF LIPID RESERVES (BO29146 X01); 12 MONTHS \$8,800

### PROFESSIONAL STAFF ASSN OF LOS ANGELES COUNTY

RUSSELL, PINDLAY E: ELECTRON MICROSCOPY OF THE BLACK WIDOW SPIDER AND SCORPION VENOM GLANDS (B017573 001); \$1,100 RUSSELL, FINDLAY E; ELECTRON MICROSCOPY, AND CHEMICAL

AND PHYSIOPHARMACOLOGICAL PROPERTIES OF THE SPIDER VENOM APPARATUS (B017374 004); 24 MONTHS \$35,000

#### SALK INSTITUTE FOR BIOLOGICAL STUDIES

GOSPODAROWICZ, DENIS J; INTERACTION OF LH WITH LUTEAL CELLS (BO34115); 12 MONTHS \$40,000

#### SCRIPPS CLINIC AND RESEARCH FOUNDATION

DANDLIKER, WALTER B; FLUORESCENT HAPTEN-ANTIHAPTEN REACTIONS (BOJISTI): 24 MONTHS \$60,000

#### STANFORD UNIVERSITY

RAY, PETER M; CELL WALL METABOLISM AND AUXIN ACTION (BOJJ927 X00); 12 MONTHS \$88,000

#### UNIVERSITY OF CALIFORNIA, BERKELEY

HASSID, WILLIAM Z; ENZYMATIC REACTIONS OF SUGAR NUCLEO-TIDES (B011819 001); 24 MONTHS \$73,000

YARWOOD, C E: PREDISPOSITION TO DISEASE IN PLANTS (BOSSIES 001): 24 MONTHS \$40,000

ARNON, DANIEL I; BIOENERGETIC AND SYNTHETIC MECHANISMS IN PHOTOSYNTHESIS (BOJOID) X00), 12 MONTHS \$70,600 JENSEN, WILLIAM A; THE ROLE OF MEMBRANES IN DOUBLE FER-

TILIZATION IN ANGIOSPERMS (FLOWER PLANTS) (BOS1101): 24 MONTHS \$68,500

TANADA, Y; RESISTANCE OF INSECT AND VECTOR TO INFECTIOUS DISEASE (BOJ\$195); 24 MONTHS \$52,000

#### UNIVERSITY OF CALIFORNIA, DAVIS

KOSUGE, TSUNE; REGULATION OF AROMATIC AMINO ABIOSYNTHESIS IN HIGHER PLANTS (BOISSON 001); 21 MONTHS \$37,000

STUMPF, PAUL K; ENZYMATIC MECHANISMS INVOLVED IN LIPID METABOLISM IN HIGHER PLANTS (BIRLING XXI): 14 MONTHS \$42,800
CONN. ERIC E; ENZYMIC ASPECTS OF CYANOGENIC GLYCOSIDE

BIOSYNTHESIS (BOJOJIS XOO); 12 MONTHS \$22,000

SMITH, ROBERT E; NEUROHUMORAL CONTROL OF THERMOGENESIS IN BROWN ADIPOSE TISSUE (BOSOSOS); 24 MONTHS \$60,100

CASTELFRANCO, PAUL A: CHLOROPHYLL BIOSYNTHESIS AND PLASTID DIFFERENTIATION IN CELL FREE ORGANELLE PREPARA-TIONS (BOJ1261); 24 MONTHS \$54,000

CURRY. DONALD L; FACTORS CONTROLLING INSULIN SECRETION (BOJ2190); 24 MONTHS \$32,400

M. DUNIWAY. WATER JOHN RELATIONS STUDIES PHYTOPI: THORA ROOT OF SAFFLOWER (BOJ2809); 24 MONTHS \$30,000 YANG. SHANG FA; MECHANISM AND REGULATION OF ETHYLENE

EPSTEIN, EMANUEL; SALINITY AND SALT TRANSPORT IN PLANTS (B033921 X00): 12 MONTHS \$29,000

### UNIVERSITY OF CALIFORNIA, LOS ANGELES

BIOSYNTHESIS (BOJJ907 X00); 12 MONTHS \$20,300

GROSSMAN, MORTON 1; PANCREATIC AND BILIARY PHYSIOLOGY (B007285 XOJ): 12 MONTHS \$13,300

MUSCATINE, LEONARD; BIOCHEMISTRY AND PHYSIOLOGY OF PLANT-ANIMAL SYMBIOSIS (B011940 001), 24 MONTHS \$40,800

ENGELMANN, FRANZ: REGULATION OF REPRODUCTION APPROTEIN BIOSYNTHESIS IN INSECTS (B014945 001); 24 MONTHS \$62,000 ATKINSON, DANIEL E, INTERACTIONS OF CYTOPLASMIC REGULATORY PARAMETERS WITH MITOSIS, ENZYME REPRESSION, AND DIF-FERENTIATION (B028458 X01); 12 MONTHS \$29,200

HAMNER, KARL C; THE BIOLOGICAL CLOCK AND PLANT REPRODUC-TION (B( 10608); 24 MONTHS \$56,200

GORDON, MALCOLM S; STUDIES IN THE ECOLOGICAL PHYSIOLOGY OF AMPHIBIOUS FISHES (BOSISO); 12 MONTHS \$8,100

LASCELLES, JUNE; THE REGULATION OF TETRAPYRROLE SYNTHE-SIS AND ASSOCIATED COMPLEXES (BOJZI IZ X00); 12 MONTHS \$26,000 GEISSMAN, THEODORE A; STUDIES IN PHYTOCHEMISTRY (BOSS724 X00): 12 MONTHS \$24,000

### UNIVERSITY OF CALIFORNIA, SAN DIEGO

CHRISPEELS, MAARTEN J. BIOSYNTHESIS OF CELL WALL GLYCOPROTEIN (B030215); 24 MONTHS \$35,000

KAPLAN, NATHAN O, AND WITHOLT, BERNARD; MEMBRANE AS-SOCIATED ENZYME SYSTEMS (BOJOSS); 24 MONTHS \$38,000

SPOONER, CHARLES E: CHEMICAL AND CELLULAR BASIS OF LOCOMOTOR ACTIVITY IN THE MARINE TELEOST (OXYJULIUS CALIFORNICA) (B033061); 24 MONTHS \$20,000



UNIVERSITY OF CALIFORNIA, SANTA BARBARA

HOLMEB, WILLIAM N. ENDOCRINE FACTORS ASSOCIATED WITH THE WATER AND ELECTROLYTE REQULATION IN BIRDS (BOROMO 001); \$3,700 HOLMES, WILLIAM N. ENDOCRINE FACTORS ASSOCIATED WITH THE WATER AND ELECTROLYTE REGULATION IN BIRDS (BOMBO) 603); \$1,100 HOLMES, WILLIAM N; ENDOCRINE FACTORS ASSOCIATED WITH WATER AND ELECTROLYTE METABOLISM IN BIRDS (BOTOSM OOT); 24 MONTHS \$ 1,000

CHAPPEE, ROWAND R J; PRIMATE THERMAL ACCL.
BIOCHEMISTRY AND PHYSIOLOGY (BOSIEIO): 24 MONTHS \$35,000 ACCLIMATION

UNIVERSITY OF SOUTHERN CALIFORNIA

BRODIE, ARNOLD F; PHOTOCATALYZED REACTION OF BIOENER-GETIC ENEYMES (BOSSISSI X00); 12 MONTHS \$37,100

STANFORD UNIVERSITY-SCHOOL OF MEDICINE

ROSENQUIST, GRACE L, AND RAFFEL, SIDNEY; PHYLOGENY OF THE IMMUNE RESPONSE (BOISTLE COI); 12 MONTHS \$18,000

University of California, Davis-Agricultural experiment STATION

SPURR, ARTHUR R; SODIUM DISTRIBUTION IN THE TISSUES OF LYCOPERSICON SPECIES (BOJOSTI): 12 MONTHS \$3,900

University of California, Davis-School of Medicine

Benjamini, Elieżer, and Shifrine, Moshe: The Preferential INDUCTION OF SPECIFIC CELL-MEDIATED IMMUNITY AND ITS APPLI-CATION TO TUMOR REGRESSION (BOJOGOT); 24 MONTHS \$40,000

UNIVERSITY OF CALIFORNIA, LOS ANGELES-SCHOOL OF MEDICINE WHITE, FRED N; CIRCULATORY REGULATION IN VERTEBRATES (B008\$24 001); 24 MONTHS \$38,600

COOPER, EDWIN L: EVOLUTION OF CELLULAR IMMUNITY (BOITTET 001); 24 MONTHS \$54,000

EISENBERG, ROBERT S; ANALYSIS OF THE SPATIAL SPREAD OF CURRENT IN STRUCTURES OF BIOLOGICAL SIGNIFICANCE (BONGS) 001), 12 MONTHS \$20,000

UNIVERSITY OF CALIFORNIA, SAN DIEGO-SCRIPPS INSTITUTION OF **OCEANOGRAPHY** 

SOMERO, GEORGE NICHOLLS; MOLECULAR MECHANISMS OF TEM-PERATURE COMPENSATION IN FISHES (BOJION): 24 MONTHS \$54,000

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO-SCHOOL OF MEDICINE KEARNEY, EDNA B; SUCCINIC DEHYDROGENASE- ITS ROLE IN THE REGULATION OF OR ADAPTATION AND THE BIOSYNTHESIS OF ITS AC-TIVE SITE (BOJO078); 24 MONTHS \$32,800

UNIVERSITY OF SOUTHERN CALIFORNIA-SCHOOL OF MEDICINE JONES, MARY ELLEN; BIOSYNTHETIC AND TRANSFER REACTIONS (BOJ1317); 13 MONTHS \$41,700

UNIVERSITY OF THE PACIFIC PACIFIC MARINE STATION

LOOSANOFF, VICTOR L; PROPAGATION OF THE AMERICAN OYSTER. CRASSOSTREA VIRGINICA (GMELIN) (BOSISSO); 12 MONTHS \$9,900

#### COLORADO

COLORADO STATE UNIVERSITY

HANCHEY, PENELOPE J; PATHOLOGICAL CHANGES IN PLANT CELL MEMBRANES (B030232): 24 MONTHS \$16,000

HANAN, JOE J, AND SMITH, J L; TEMPERATURE IN REPRODUCTIVE STRUCTURES AND ITS EFFECT ON DEVELOPMENT AND REPRODUC-TION (BOJISIE): 24 MONTHS \$28,600

UNIVERSITY OF COLORADO

GAMOW, RUSTEM IGOR; ADAPTATION IN PHYCONYCES BY LASER MICROBEAM (B031039); 24 MONTHS \$30,000

UNIVERSITY OF COLORADO-DENVER MEDICAL CENTER

KATSH, SEYMOUR; ISOLATION AND CHARACTERIZATION OF ASPER-MATOGENIC ANTIGEN AND RESPECTIVE ANTIBODY (BOJISS X00): 12 MONTHS \$40,000

#### CONNECTICUT

UNIVERSITY OF CONNECTICUT

CHAPPLE, WILLIAM D; CENTRAL CONTROL OF THE HYDROSTATIC SKELETAL SYSTEM OF THE HERMIT CRAB ABDOMEN (BOIZJES 001); 12 MONTHS \$12,300

CLARK, NANCY B; PARATHYROID STRUCTURE AND FUNCTION IN REPTILES (Bossss XoI), 12 MONTHS \$15,600

ROMANO, ANTONIO H; THE COMPARATIVE PHYSIOLOGY OF SUGAR TRANSPORT IN MICROORGANISMS (BOJISLI); 24 MONTHS \$33,500

DOEG, KENNETH A: METABOLIC ALTERATIONS IN DEVELOPING POLYCYSTIC OVARY (Bostses); 24 MONTHS \$25,000

WRSLEYAN UNIVERSITY

KIDDER, GEORGE W III; ENERGY TRANSFER IN GASTRIC ACID SECRETION (B008540 001); 24 MONTHS \$40,800

YALR UNIVERSITY

RAMUS, J; PRODUCTION OF EXTRACELLULAR POLYSACCHARIDE BY A UNICELLULAR RED ALGA (BOISI 14 001); 24 MONTHS \$30,000

URIBE, ERNEST G: MEMBRANF FUNCTION IN ENERGY FLOW IN CHLOROPLASTS (BOILLS OOL): 24 MONTHS \$34,700 TRENCH, ROBERT K, AND PROVASOLI, LUIGI; CHLOROPLAST EN-

DOSYMBIOSIS AND BIOCHEMICAL AUTONOMY (BOJUTS); 24 MONTHS \$30,000

YALE UNIVERSITY-SCHOOL OF MEDICINE

KANTOR, FRED S; MECHANISM OF DELAYED HYPERSENSITIVITY (BOISSP 001); 24 MONTHS \$35,000

FORBES, THOMAS R; ACTION AND LOCALIZATION OF PROGESTINS (B016749 001); 24 MONTHS \$48,400

#### DISTRICT OF COLUMBIA

AMERICAN CHEMICAL SOCIETY

SCHULTZ, JULIUS; TRAVEL TO ATTEND. SYMPOSIUM ON CHEMIS-TRY AND BIOLOGY OF HYDROXYLATION REACTIONS, WASHINGYIN, D. C. SEPTEMBER 1811 (BOJOLIS); 6 MONTHS \$631

GORGAS MEM INST OF TROPICAL & PREVENTIVE MED

STINEBAUGH, BOBBY J; SYSTEMIC ACIDOSIS DURING CALORIC DEPRIVATION (BOJOSIA): 18 MONTHS 46.100

NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL YAGER, ROBERT H; PARTIAL SUPPORT OF THE INSTITUTE OF LABORATORY ANIMAL RESOURCES (CITOITS 001); 12 MONTHS \$20,000 STEVENS, R B; SUPPORT OF THE COMMITTEE ON PHOTOBIOLOGY (C#10#28); 18 MONTHS \$10,000

#### FLORIDA

**FAIRCHILD TROPICAL GARDEN** 

BURG, STANLEY P; CONTROL OF CELL DIVISION AND EXPANSION BY ETHYLENE (BO27424 001): \$1,000

FLORIDA STATE UNIVERSITY

TSCHINKEL, WALTER R; ISOLATION AND CHARACTERIZATION OF THE SEX PHEROMONE OF THE MEALWORM BEETLE (BOSISSES); 24 MONTHS \$21,600

PAPANICOLAGU CANCER RESEARCH INSTITUTE

KOHEN, ELLI; MICROSPECTROFLUORIMETRIC STUDY OF ENZYME SUBSTRATE REACTIONS IN SINGLE LIVING CELLS (BOJOSTI); 24 MONTHS \$29,700

UNIVERSITY OF FLORIDA

HUBBELL, DAVID H; MECHANISM OF INFECTION OF LEGUMES BY 'RHIZOBIUM' AND ITS RELATION TO SPECIFICITY OF NODULATION (8031307); 24 MONTHS \$26,400

UNIVERSITY OF MIAMI

EVOY, WILLIAM H; ARTHROPOD MUSCLE RECEPTOR ORGANS IN CONTROL OF MOTOR COORDINATION (Bajosos); 24 MONTHS \$45,700 LOEWENSTEIN, WERNER R: STUDY OF CELLULAR MEMBRANES (BOJI211), 4 MONTHS \$17,000

UNIVERSITY OF SOUTH FLORIDA

FISHEL, CHARLES W: NATURE OF 'BORDETELLA PERTUSSIS' IN-DUCED HYPERSENSITIVITY TO HISTAMINE AND SEROTONIN (BORNIA 002); 24 MONTHS \$45,600

UNIVERSITY OF MIAMI-SCHOOL OF MARINE AND ATMOSPHERIC SCIENCES

COOKSEY, KEITH E; METABOLIC STUDIES WITH MARINE MICROAL GAE WITH SPECIAL REFERENCE TO PHOTOHETEROTROPHY (BOJ1101); 24 MONTHS \$35,000

UNIVERSITY OF MIAMI-SCHOOL OF MEDICINE

CATLEY, BRIAN J; BIOSYNTHESIS OF PULLULAN (BOJ0356); 24 MONTHS \$18,900

#### GEORGIA

UNIVERSITY OF GEORGIA

EAGON, ROBERT G; BACTERIAL TRANSPORT MECHANISMS (BOOGST) 001); 24 MONTHS \$30,000

CORMIER, MILTON J; CHEMISTRY AND ENZYMOLOGY OF BIOLU-

MINESCENCE (BO26559 XOI); 12 MONTHS \$39,000

LEGALL, JEAN; STUDY OF THE ELECTRON TRANSFER CHAIN OF

SULFATE REDUCING BACTERIA (BOSSIS XOI); 12 MONTHS \$24,250
TRITZ, GERALD J; ELUCIDATION OF THE QUINOLINIC ACID
BIOSYNTHETIC PATHWAY IN 'ESCHERICHIA COLF (BOSSIS XOI); 12 MONTHS \$16,800

FISHER, DONALD B; INTERCELLULAR TRANSPORT OF ORGANIC COMPOUNDS IN PLANTS (BOASSOS XOO); 12 MONTHS \$27,800

FINNERTY, WILLIAM R; MECHANISMS OF HYDROCARBON OXIDA-TION BY MICROORGANISMS (BOJIPO): 24 MONTHS \$30,000

CORMIER, MILTON J, HERCULES, DAVID M, AND LEE, JOHN; SYM-POSIUM ON CHEMILUMINESCENCE (BO34758); 12 MONTHS \$2,000

BMORY UNIVERSITY-YERKES REGIONAL PRIMATE RESEARCH CENTER

MARTIN, DAVID E; REPRODUCTIVE PHYSIOLOGY OF PRIMATES (BOJ1348), 24 MONTHS \$34,500



MARTIN, DAVID E: REPRODUCTIVE PHYSIOLOGY OF PRIMATES (B011111 001); \$1,900

NADLER, RONALD D; EFFECT OF HORNONES ON BRAIN DIF-FERENTIATION (BOSILSI): 12 MONTHS \$2,000

### KAWAH

UNIVERSITY OF HAWALL

KAMEMOTO, FRED 1; HYDROMINERAL REGULATION AND NEUROEN-DOCRINE ADAPTATION IN CRUSTACEANS (Bisosti); 24 MONTHS \$44,000 YAMAMOTO, HARRY Y! THE FUNCTION OF CAROTENOIDS IN PHOTOSYNTHESIS (BOJECE XOO); 12 MONTHS \$22,000

UNIVERSITY OF HAWAII-SCHOOL OF MEDICINE

WHITTOW, G CAUSEY; BEHAVIORAL THERMOREGULATION IN MARINE MAMMALS (BOSSESS XOI); 12 MONTHS \$16,000 GUILLORY, PICHARD J; MECHANISM OF THE ENERGY LINKED

TRANSHYDROGENASE (BOJOSEE); 12 MONTHS \$10,900

#### ILLINOIS

UNIVERSITY OF CHICAGO

ROTH, LLOYD J; SEMINAR ON THE USE OF STABLE ISOTOPES IN CLINICAL PHARMACOLOGY (BOSTISS); 12 MONTHS \$3,000

UNIVERSITY OF ILLINOIS AT URBANA

DICKINSON, DAVID B; REGULATION OF METABOLISM IN GERMINAT-

ING POLLEN (8001714 002); 24 MONTHS \$30,000 HEATH, JAMES EDWARD; COMPARATIVE STUDY OF TEMPERATURE REGULATION (8018787 001); 24 MONTHS \$45,000

GUNSALUS, I C. ISOPRENOID METABOLISM- REGULATION AND SPECIFICITY (Bossate oos); \$17,500

WOOD. JOHN M: MICROBIAL DEGRADATION OF AROMATIC NATURAL PRODUCTS AND BIODEGRADABLE INSECTICIDES AND HERBICIDES

(Bosssa Xoi); 18 MONTHS \$20,000 VOSS, EDWARD W JR; PURIFICATION AND SEPARATION OF ANTIBODY PRODUCING CELLS (BOJION; 24 MONTHS \$30,000 GUNSALUS, I C; ISOPRENOID METABOLISM REGULATION AND

SPECIFICITY (BOJJESS XOO); 12 MONTHS \$50,000

INDIANA UNIVERSITY, BLOOMINGTON

GEST, HOW MED: MECHANISMS OF REGULATION OF BIOSYNTHETIC METABOLISM IN PACTERIA (BOOTHH XOI); 12 MONTHS \$80,000

RAMALEY, ROBERT F; BIOCHEMISTRY OF BACTERIAL SPORULA-TION (BOIJIOJ 001); 24 MONTHS \$41,500

RAMALEY, JUDITH A: ADRENAL MATURATION AND FERTILITY (Bailts) 001); 24 MONTHS \$28,000

HAUROWITZ, FELIX; BIOSYNTHESIS AND STRUCTURE OF ANTIBODIES AND OTHER PROTEINS (BOSSIS) 601); 12 MONTHS \$5,300

SOJKA, GARY A; REGULATION OF SYNYHESIS OF THE PHOTOCHEMI-CAL APPARATUS OF THE PHOTO-SYNTHEFIC BACTERIUM, 'RHODOP-SEUDOMONAS CAPSULATA' (B04001); 24 MONTHS \$33,000

KOCH, ARTHUR L: PERMEASE IN ACTIVE TRANSPORT (BOJ2118): 24

MONTHS \$38,000

PURDUE UNIVERSITY

RUC, JOSEPH A, AND WILLIAMS, EDWIN B; BIOCHEMICAL EXPRES-SION OF GENETIC DETERMINANTS CONTROLLING DISEASE RE-SISTANCE IN PLANTS (8014994 001); 24 MONTHS \$40,600

REGNIER, FRED E; CHEMICAL COMMUNICATION IN ANIMALS (80/0179 X00); 12 MONTHS \$21,200

REGNIER, FRED E: CHEMICAL CHAUNICATION IN ANIMALS (Bojoi79 Xor); 12 MONTHS \$21,400

DILLEY, RICHARD A: BIOCHEMISTRY OF CHLOROPLAST MEM-BRANES (BOJOSPI): 24 MONTHS \$13,000 HODGES, THOMAS K; THE ENERGETICS OF ION TRANSPORT IN PLANTS (BOJIOSI XOO), 12 MONTHS \$21,300

GOLUB, ELWARD S: FUNCTIONAL ONTOGENY OF THE IMMUNE RESPONSE (BOSSIES); 12 MONTHS \$35,000

LEMBI, CAROLE A; BIOCHEMICAL CHARACTERIZATION OF THE

PLANT PLASMA MEMBRANE (BOJJ7J2); 24 MONTHS \$29,000

UNIVERSITY OF IOWA

STAHLY, DONALD P; METABOLISM AND CONTROL PROCESSES IN-VOLVED IN BACTERIAL SPORULATION (BOJEIOI); 24 MONTHS \$36,000

### KANSAS

KANSAS STATE UNIVERSITY

LELAND, STANLEY E JR: IN VITRO GROWTH REQUIREMENTS OF PARASITIC NEWATODES (BOOTSJ2 001); 24 MONTHS \$38,200

UNIVERSITY OF KANSAS

BOYES, EUGENE C; EFFECTS OF POLLUTANTS AND OTHER CHEMI-CALS ON PROTOZOAN MOTILE BEHAVIOR (Boissis coi); 12 MONTHS \$10,000

PARETSKY, DAVID: STUDIES ON THE BIOCHEMISTRY AND PHYSIOLOGY OF HOST-PARASITE RELATIONSHIPS DURING RICKETT-SIAL INFECTION (BOJISIS): 24 MONTHS \$60,000

UNIVERSITY OF KANSAS, UNIVERSITY OF KANSAS MEDICAL, CENTER WOOD, JACKIE D; FUNCTION OF THE ENTERIC NERVOUS SYSTEM (BO\$1888); \$20,100

#### KENTUCKY

University of Kentucky

RODRIGUEZ, JUAN G, CONFERENCE ON 'SIGNIFICANCE OF INSECT AND MITE NUTRITION (BO11304); 12 MONTHS \$2,000

LOUISIANA STATE UNIVERSITY, BATON ROUGE

MEIER, ALBERT H; TEMPORAL SYNERGISM OF PROLACTIN AND HYDROCORTISONE IN THE GULF KILLIFISH, FUNDULUS GRANDIS (BO20913 CO1); 24 MONTHS \$37,000

LAMBREMONT, EDWARD N; INSECT LIPIDS STRUCTURE AND METABOLISM OF ETHER AND ACYL-BONDED GLYCEROLIPIDS (BOJJ450); 24 MONTHE \$24,600

#### THILANK HIMIVERSITY

FINCERMAN, MILTON: ROLE OF SEROTONIN IN THE CONTROL OF COLOR CHANGES IN THE FIDDLER CRAB (BOSTIST COI): 24 MONTHS \$58,000

#### TULANE UNIVERSITY-SCHOOL OF MEDICINE

LESLIE. GERRIE ALLEN; MODULATION OF IMMUNOGLOBULIN SYNTHESIS AND THE IMMUNE RESPONSE (BOJ1001); 24 MONTHS \$31,000

#### MAINE

UNIVERSITY OF MAINE, ORONO

GELINAS, DOUGLAS A; THE BIOCHEMICAL BASIS FOR ELEVATED LEVELS OF INDOLEACETIC ACID OXIDASE INHIBITORS IN KNOTTED MUTANTS (BOJOSJS): 24 MONTHS \$20,000

GOUCHER COLLEGE

HABERMANN, HELEN M; PIGMENT DEFICIENT MUTANTS OF HELIANTHUS ANNUUS (BOJ4890); 6 MONTHS \$2,500

JOHNS HOPKINS UNIVERSITY

NASON, ALVIN: ELECTRON THANSPORT SYSTEMS OF THE CHEMOAUTOTROPHIC NITRIFYING BACTERIA (BOILLY XOO): 12 MONTHS \$30,000

University of Maryland, Baltimore county

BURCHARD, ROBERT P. GLIDING MOTILITY IN MYXOCOCCUS XANTHUS (BOSIIII); 24 MONTHS \$22,900

JOHNS HOPKINS UNIVERSITY-SCHOOL OF HYGIENE & PUBLIC HEALTH

REISSIG. MAGDALENA; ELECTRON MICROSCOPY OF SCHISTOSOMES (B017847 001); 24 MONTHS \$50,000

SHIF, ILAN, AND BANG, FREDERICK B; GENETIC RESISTANCE TO MOUSE HEPATITIS VIRUS (BOSILIE); 24 MONTHS \$32,000

SCHILLER, EVERETT L; MORPHOGENESIS, CYTOCHEMISTRY AND METABOLISM OF LEISHMANIAE (BOSTSSE); 24 MONTHS \$40,000

JOHNS HOPKINS UNIVERSITY-SCHOOL OF MEDICINE

MAYER. MANFRED M; IMMUNOLOGICAL AND CHEMICAL STUDIES OF THE COMPLEMENT SYSTEM (BOOTION XOJ); 12 MONTHS \$42,800

SHIN, HYUN S; FACTORS INFLUENCING THE PHAGOCYTIC CAPA-BILITIES OF POLYMORPHONUCLEAR LEUCOCYTES (BOOSIES 001); 12 MONTHS \$34,700

university of Maryland, college park-school of medicine GRENELL, ROBERT G; THE INIBITION OF INHIBITION AND ITS ROLE IN REGULATION OF SENSORY PROCESSING IN THE CEREBRAL CORTEX (BO18042 001): 12 MONTHS \$3,000

MAI.TIN COMPANY-RIAS DIVISION

CHENIAE, GEORGE M; MANGANESE CATALYST(S) OF PHOTOSYNTHETIC OXYGEN EVOLUTION- PHOTOACTIVATION OF THE CATALYST (C704000): 12 MONTHS \$24,800

KOK, BESSEL; RESEARCH IN PHOTOSYNTHESIS (C105000); 36 MONTHS \$25,400

#### MASSACHUSETTS

BOSTON BIOMEDICAL RESEARCH INSTITUTE

SANADI, D RAO; RESOLUTION AND RECONSTITUTION OF OXIDATIVE PHOSPHORYLATION (BOSISIS); 24 MONTHS \$36,000

BOSTON UNIVERSITY

CALLARD, IAN P; REPTILIAN REPRODUCTIVE PHYSIOLOGY (BOJIGST); 12 MONTHS \$17,200

BRANDEIS UNIVERSITY

LOWENSTEIN, JOHN M; REGULATION OF FATTY ACID SYNTHESIS (8028706 X01); 12 MONTHS \$15,000

GIBBS, MARTIN; PATHWAY OF CARBOHYDRATE METABOLISM IN THE AUTOTROPHIC CELL WITH SPECIAL REFERENCE TO THE HIGHER PLANTS AND ALGAE (BO29126 Xo1): 12 MONTHS \$41,100



HALVORSON, HARLYN O; BIOCHEMICAL AND BIOPHYSICAL IN-VESTIGATIONS OF PROTEIN SYNTHESIS (BOJOCOS); 15 MONTHS 445,500

ABELES, ROBERT H; FUNCTIONAL GROUPS AT ENZYME ACTIVE SITES AND DESIGN OF HIGHLY SPECIFIC ENZYME INHIBITORS (BASIDSE XOO); 12 MONTHS \$31,600

#### CHILDRENS HOSPITAL MEDICAL CENTER

ABRAHAM, SAMUEL; LIPOGENESIS IN MAMMARY GLAND (8634087); 24 MONTHS \$43,300

#### ENDOCRINE SOCIETY

WILHELMI, ALFRED E; FOURTH INTERNATIONAL CONGRESS OF ENDOCRINOLOGY (BOSESS), 12 MONTHS \$8,000

#### HARVARD UNIVERSITY

PAPPENHEIMER, ALWIN M JR; J. STUDIES ON PNEUMOCOCCAL ANTI-POLYSACCHARIDE ANTIBODIES II. BIOLOGY OF DIPHTHERIA AND OF THE DIPHTHERIA BACILLUS (BGIBJI) 701); 2 MONTHS \$5,400

BERLIN, RICHARD D; TRANSFER OF PURI, ES BY ERYTHROCYTES TO NON-HEPATIC TISSUES (BOJOIJO X00); 12 MONTHS \$25,800
JENKINS, FARISH A JR; A CINERADIOGRAPHIC STUDY OF LOCOMO-

TION AND POSTURE IN THREE PRIMITIVE MAMMALS (BOSO724); 10 MONTHS \$1,000

BOGORAD, LAWRENCE; THE METABOLISM OF PYRROLIC COM-POUNDS (BOSTITA); 24 MONTHS \$40,000

TORREY, JOHN G; RHIZOBIAL NODULE INITIATION (BOJ1480); 24 MONTHS 438,200

CLELAND, CHARLES F; INVESTIGATION INTO THE HORMONAL CON-TROL OF FLOWERING (BOJIESS); 24 MONTHS \$22,000

#### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

BUCHANAN, JOHN M; AMINO ACID AND NUCLEOTIDE METABOLISM (BOJOJI 1 X00); 12 MONTHS \$50,000

BROWN, GENE M; BIOSYNTHESIS OF B VITAMIN AND RELATED COM-POUNDS (BOSSES XOO), 12 MONTHS \$39,000

#### RETINA FOUNDATION

LAM, KWOK-WAI; INVESTIGATION OF COUPLING FACTORS IN OXIDA-TIVE PHOSPHORYLATION (BÖJJ10J); 24 MONTHS \$24,000

#### SMITH COLLEGE

GUSSIN, ARNOLD E S; PURIFICATION, CHARACTERIZATION, AND SEQUENCE DETERMINATION OF TREHALASE (BOZZEJS XOI); 12 MONTHS 811 300

#### TUFTS UNIVERSITY

FEINLEIB, MARY ELLA; MECHANISM OF ORIENTATION IN ALGAL PHOTOTAXIS (BOSINOS); 24 MONTHS \$26,200

### UNIVERSITY OF MASSACHUSETTS, BOSTON

LIPKE, HERBERT; CHITIN - PROTEIN LINKS IN ARTHROPOD CUTI-CLE (B03/350): 24 MONTHS \$48.000

### WORCESTER FOUNDATION FOR EXPERIMENTAL BIOLOGY

CASPI, ELIAHU; ANTHERIDIOL- MODE OF FORMATION OF THE PLANT HORMONE (BOLLSO); 24 MONTHS \$42,000

GUT, MARCEL; BIOSYNTHESIS OF PREGNENOLONE (B025558 X01); 12 MONTHS \$25,600

### HARVARD UNIVERSITY-HARVARD MEDICAL SCHOOL

LIN, EDMUND C C: CONSTRUCTION OF METABOLIC PATHWAYS IN BACTERIA BY MUTATIONS (BOSESTS XOI), 12 MON THS \$21,000

### TUFTS UNIVERSITY-SCHOOL OF MEDICINE

NAJJAR, VICTOR A; THE PHAGOCYTOSIS STIMULATING PEPTIDE - TUFTSIN (B031333 X00); 12 MONTHS \$55,400

### MICHIGAN

### HOPE COLLEGE

OCKERSE, RALPH; GIBBERELLIN-AUXIN INTERACTION IN PEASTEM GROWTH (BOOSTED 001); \$749

#### MICHIGAN STATE UNIVERSITY

RIEGLE, GAIL D; PHYSIOLOGICAL CONTROL SYSTEMS IN THE AGING PROCESS (8008687 002); 12 MONTHS \$10,000

BANDURSKI, ROBERT S; METABOLISM OF MICROORGANISMS AND HIGHER PLANTS (BOJSJSJ XOI): 12 MONTHS \$56,300

BANDURSKI, ROBERT S; METABOLISM OF MICROORGANISMS AND HIGHER PLANTS (BOIRSS XOZ); 12 MONTHS \$56,000

FRANTZ, WILLIAM L; RECEPTOR MECHANISM FOR PROLACTIN IN THE EPITHELIUM OF THE PIGEON CROP MUCOSA (BOJOSZS): 24 MONTHS \$25,000

ZEEVAART, JAN A. D; MECHANISM BY WHICH THE STEROID INHIBI-TOR SK&F 7997 SUPPRESSES FLORAL INDUCTION (Bosinos); 24 MONTHS \$37,000

TOLBERT, N E; LEAF PEROXISOMES (8031040 X00); 12 MONTE'S \$45,000 COSTILOW, RALPH N; CONTROL OF SPORULATION N 9ACILLI PATHOGENIC FOR INSECTS (8031308 X00); 12 MONTHS \$21,900

UFFEN, ROBERT L; BIOCHEMICAL AND STRUCTURAL DIVERSITY ANONG AQUATIC MICROORGANISMS IN ANAEROBIC ENVIRONMENTS (BOSISSIO): 24 MONTHS \$43,000

#### UNIVERSITY OF MICHIGAN

MALVIN, RICHARD L; CONTROL OF RENAL HORMONES (BOSSES) X00): 12 MONTHS \$13,000

MARTIN, MICHAEL N; ANT ECOLOGY, BEHAVIOR AND PYOLUTION (BOJISH): 24 MONTHS \$50.50

### UNIVERSITY OF MICHIGAN-MEDICAL SCHOOL

LANDS, WILLIAM E M; REGULATION OF THE BIOSYNTHESIS OF PROSTAGLANDINS (BOESSES) X01); 12 MONTHS \$39,200

DATTA, PRASANTA K; ALLOSTERIC ENZYMES AND METABOLIC REGULATION (8089016 X01); 12 MONTHS \$20,000

COON, MINOR J. DETOXICATION OF HYDROCARBONS, DRUGS, AND RELATED COMPOUNDS (BOJOLIO X00); 12 MONTHS \$80,000

CHURCHELL, PAUL C; RENIN SECRETION IN RATS (BGS1836); 24 MONTHS \$41.00

#### MINNESOTA

#### UNIVERSITY OF MINNESOTA

HOOPER, ALAN B; BIOCHEMISTRY AND PHYSIOLOGY OF NITRIFICA-TION (B015101 001); 24 MONTHS \$40,000

DEMPSEY, MARY E; BIOENERGETIC MECHANISMS (BOJJ364 X00); 12 MONTHS \$30,000

GRAY, BEULAH H; METABOLISM OF LEUKOCYTES DURING PHAGO-CYTOSIS (BOJJEJ) X00); 12 MONTHS \$20,000

#### MISSISSIPP

## MISSISSIPPI STATE UNIVERSITY AGRICULTURAL EXPERIMENT STATION

GLICK, BRUCE; IMMUNOBIOLOGICAL INFLUENCES OF PESTICIDES (B009920 X01); 12 MONTHS \$9,000

NORMENT, BEVERLY R, SIKOROWSKI, PETER, AND WILSON, CLIF-TON A; SURVEY AND STUDY OF PATHOGENIC MICROORGANISMS FOR INTEGRATED CONTROL OF MOSQUITOES (BOJOSJJ); 24 MONTHS \$23,800

#### MISSOURI

### ST LOUIS UNIVERSITY

FEIR, DOROTHY; MOLECULAR BASIS OF JUVENILE HORMONE ACTION (BO26542 001); 24 MONTHS \$35,000

#### UNIVERSITY OF MISSOURI, COLUMBIA

MCKENNA, JOHN M; THE EFFECTS OF HIBERNATION AND HYPOTHERMIA ON THE IMMUNE RESPONSE (BOOSTIS 001); 12 MONTHS \$8,700

LEVITT, JACOB; PHYSIOLOGICAL BASIS OF RESISTANCE OF PLANTS TO FROST AND DROUGHT (BOIJSES 001); 12 MONTHS \$25,000

GOODMAN. ROBERT N: ALTERATIONS IN PLANT CELLS CAUSED BY PATHOGENIC BACTERIA (B017749 001); 24 MONTHS \$66,000

DORN, JANICE B; NEUROHUMORAL CONTROL OF SODIUM EXCRE-TION (BOJOOZZ); 15 MONTHS \$37,300

MILES, CHARLES D: ANALYSIS OF PHOTOSYNTHETIC PHOSPHOR-YLATION (BOJ2011): 24 MONTHS \$27,200

ZATZMAN, MARVIN; RENAL FUNCTION AND BLOOD FLOW DISTRIBU-TION OF MARMOTS (BOJ2059 X00); 12 MONTHS \$17,000

### WASHINGTON UNIVERSITY

PICKARD, BARBARA G. ELECTRICAL ACTIVITY IN PLANTS (B031781); 24 MONTHS \$31,000

### ST LOUIS UNIVERSITY-SCHOOL OF MEDICINE

KATZMAN, PHILIP A; HORMONAL CONTROL OF METABOLISM IN VAGINAL AND UTERINE TISSUES (B008778 009); 24 MONTHS \$45,000

COSCIA, CARMINE J; BIOSYNTHESIS OF INDOLE ALKALOIDS (BO17957 001); 24 MONTHS \$36,000

#### MONTANA

#### MONTANA STATE UNIVERSITY

STROBEL, GARY A: THE NATURE AND MECHANISM OF ACTION OF SOME TOXINS PRODUCED BY PLANT PARASITES (B012956 001); 24 MONTHS \$29,300

#### UNIVERSITY OF MONTANA

SHERIDAN, RICHARD P; ADAPTIVE MECH INISMS IN PHOTOSYNTHE-SIS (Boisses con); \$5,200

#### NEBRASKA

### UNIVERSITY OF NEBRASKA AT LINCOLN

STOHS, SIDNEY J. AND EL-OLEMY, MAHMOUD M; STEROL SIDE CHAIN CLEAVAGE AND STEROID METABOLISM IN CARDENOLIDE PRODUCING PLANTS (8013834 001); 24 MONTHS \$12,000

BRAKKE, MYRON K, AND BALL, ELLEN M; LOCALIZATION AND SITE OF SYNTHESIS OF VIRUS COMPONENTS IN INFECTED PLANT CELLS (B019015 X01): 12 MONTHS \$20,100

### UNIVERSITY OF NEBRASKA MEDICAL CENTER AT OMAHA

MORIARTY, C N; MODEL SYSTEM FOR THE STUDY OF ACTIVE CALCI-UM TRANSPORT (8030318); 24 MONTHS \$30,000



#### CREIGHTON UNIVERSITY-SCHOOL OF MEDICINE

MAGEE, DONAL F; PEPSIN SECRETION (BOIISES COI): 24 MONTHS £28.000

#### NEVADA

#### DESERT RESEARCH INSTITUTE

WENT, F W: PLANT PHYSIOLOGICAL AND BIOCHEMICAL PROBLEMS IN ARID REGIONS (B017731 X01), 12 MONTHS \$93,100

### COLLEGE OF MEDICINE & DENTISTRY OF NEW JERSEY

GONA, AMOS G: THE NATURE OF HORMONE ACTION IN AMPHIBIAN DEVELOPMENT (BOOM 147 001); 24 MONTHS \$17,800

#### PRINCETON UNIVERSITY

DETHIER, VINCENT G; NEUROLOGICAL BASIS OF BEHAVIOR OF THE BLOWFLY (B004971 004); 12 MONTHS \$16,800

GILVARG, CHARLES; METABOLISM OF PEPTIDOGLYCAN DURING THE CELL CYCLE (BOSSIOS 001); 12 MONTHS \$22,000

JACOBS, WILLIAM P. REGULATION OF HORMONE TRANSPORT IN PLANTS (BOISSS XOI); 12 MONTHS \$29,400

JOHNSON, FRANK H. AND GELPERIN, ALAN; THE METABOLIC FUNC-TIONS OF CALCIUM (BOSISSE): 12 MONTHS \$40,000

#### RUTGERS UNIVERSITY

UMBREIT, WAYNE W; STUDY OF AUTOTROPHY (Bozzes Xoi): 12 MONTHS \$17,600

#### **NEW MEXICO**

### UNIVERSITY OF NEW MEXICO-SCHOOL OF MEDICINE

RATNER, ALBERT, PROSTAGLANDINS ROLE IN THE NEUROEN-DOCRINE REGULATION OF LUTEINIZING HORMONE AND PROLACTIN (B032077); 24 MONTHS \$38,000

#### **NEW YORK**

### AMERICAN MUSEUM OF NATURAL HISTORY

BLISS, DOROTHY E; CRUSTACEAN MOLT-CONTROLLING HORMONES (BOS) 136 X001; 12 MONTHS \$50,800

### BOYCE THOMPSON INST FOR PLANT RESEARCH INC

STAPLES, RICHARD C, AND YANIV, ZOHARA; PROTEIN SYNTHESIS IN UREDOSPORES OF THE RUST FUNGI (BOITOO) 001); 24 MONTHS \$50,000 MARAMOROSCH, KARL, AND STREISSLE, GERT, EFFECTS OF INSECT

VIRUSES ON ANIMAL CELLS IN VITRO (BO29277 XOI); 12 MONTHS \$29,600 MARAMOROSCH, KARL; FUNDAMENTAL RESEARCH MYCOPLASMA-LIKE ACENTS (BO20280 X01); 12 MONTHS \$44,600

MACKO, VLADIMIR, AND STAPLES, RICHARD C; REGULATION OF UREDOSPORE GERMINATION AND GERM TUBE DEVELOPMENT (8010693 X00), 12 MONTHS \$30,900

PITMAN, G B, RENWICK, J A A, AND VITE, J P. EVOLUTION OF MECHA: IISMS AFFECTING BIOSYNTHESIS AND RESPONSE (BOJSII), 24 MONTHS \$48,100

### BROOKHÁVEN LABORATORY

HIND, GEOFFREY; THE ROLE OF CYTOCHROMES IN PHOTOSYNTHES. IS (AG00179); 24 MONTHS \$27,000

#### COLLEGE AT PLATTSRURGH

ELLSWORTH, ROBERT K: CHLOROPHYLL A BIOGENESIS (BOJO000 001); 12 MONTHS \$11,500

### COLLEGE OF ENVIRONMENTAL SCIENCE AND FORESTRY

SILVERSTEIN, ROBERT M; CHEMISTRY AND BIOLOGY OF BARK BEE-TLE PHEREMONES (B015959 001); 24 MONTHS \$58,500

#### CORNELL UNIVERSITY

STEINKRAUS, KEITH H; STUDIES OF IN VIVO AND IN VITRO GROWTH AND SPORULATION OF MILKY DISEASE BACTERIA (BO27966 XOI): 12 MONTHS \$57,600

MCCARTY, RICHARD E: PHOTOSYNTHETIC PHOSPHORYLATION AND ELECTRON TRANSPORT (B030597 X00); 12 MONTHS \$27,000

### DOWNSTATE MEDICAL CENTER AT BROOKLYN

CASTELLS, SALVADOR; CONTROL OF PROTEIN AND RNA SYNTHESIS IN FETAL ADRENAL GLAND (B016614 001); 24 MONTHS \$53,000

#### ALTH RESEARCH INC

AMIRAIAN, KENNETH; INTERACTIONS OF BOVINE CARBOXYPEP-TIDASE (B031583); 6 MONTHS \$5,000

#### MT SINAI SCHOOL OF MEDICINE

BENTLEY, PETER J; PHYSIOLOGY OF EPITHELIAL MEMBRANES IN AMPHIBIA (BO2854) X01); 12 MONTHS \$18,200

BRODSKY, WILLIAM A: ENZYMATIC AND ELECTROPHYSIOLOGICAL ASPECTS OF ION TRANSPORT (BOJ1061): 24 MONTHS \$54,000

BARTOSIK, DELPHINE; LUTEOLYSIS- PHYSIOLOGICAL, BIOCHEMICAL AND HISTOLOGICAL (BOX7118 001); \$4,400

HOROWITZ, MARTIN I; IMMUNOCHEMISTRY OF CATTLE BLOOD GROUP J HAPTEN AND OF THE PROTEIN-BOUND J SUBSTANCE (BOJ156); 24 MONTHS \$3.400

### PUBLIC HEALTH RESEARCH INSTITUTE OF NEW YORK

KENT, JOAN L: MICRO-ENVIRONMENTAL REGULATION OF ENZYME ACTIVITY AND SPECIFICITY IN DNA METABOLISM (BOOTSAS OOI); 24 MONTHS \$33,000

OSLER, ABRAHAM G: AVTIBODIES . STUDIES OF THEIR SYNTHESIS AND BIOLOGIC ACTIVITIES (BOSITSS X00); 12 MONTHS \$43,100

MOSBACH, ERWIN H: BIOLOGICAL SIGNIFICANCE OF CHOLESTANOL (Bosisis X00); 12 MONTHS \$22,000

#### Q'EENS COLLEGE

TROPP, BURTON E: PHOSPHOLIPID SYNTHESIS AND BIOCHEMICAL REGULATION (B633718); 24 MONTHS \$30,000

#### ROCKEFELLER UNIVERSITY

DE DUVE, CHRISTIAN; BIOCHEMICAL STUDIES ON LYSOSOMES AND PEROXISOMES (BO05786 X01); 4 MONTHS \$27,000

RIZACK, MARTIN A; CELLULAR PHYSIOLOGY OF ENZYME REGULA. TION (BOJ1004 X00); 12 MONTHS \$20,900

SPECTOR, LEONARD B: THE ACETATE KINASE REACTION (BOSSTIA); 24 MONTHS \$28,000

#### STATE UNIVERSITY AT BINGHAMTON

POSNER, HERBERT B; FLOWERING RESPONSES TO CABOHYDRATES, MINERALS AND LIGHT (B012935 001); 12 MONTHS \$6,000

#### STATE UNIVERSITY AT STONY BROOK

IRVINO, RONALD E; COMPARATIVE ANATOMICAL INVESTIGATION OF THE AUDITORY SYSTEM (BOJORTS); 6 MONTHS \$9,800

#### SYRACUSE UNIVERSITY

HAINSWORTH, F REED; TEMPERATURE REGULATION AND WATER METABOLISM OF BIRDS AND MAMMALS (BOIRGIL 001); 24 MONTHS \$34,400

#### TRUDEAU INSTITUTE

HILL, WILLIAM C JR; IMMUNOCHEMISTRY OF THE RECEPTOR OF DELAYED TYPE HYPERSENSITIVITY (BOJ4373); 24 MONTHS \$46,100

#### UPSTATE MEDICAL CENTER AT SYRACUSE

AMES, IRA R; GENETICALLY CONTROLLED TUMOR FORMATION (B032864); 24 MONTHS \$35,000

### YESHIVA UNIVERSITY

LEV, MEIR; VITAMIN K INVOLVEMENT IN THE METABOLISM OF MEMBRANE LIPIDS (B013590 002); 24 MONTHS \$50,000

### COLUMBIA UNIVERSITY-COLLEGE OF PHYSICIANS AND SURGEONS

KABAT, ELVIN; IMMUNOCHEMICAL STUDIES ON POLYSACCHARIDES (B025888 004): \$22 000

CIZEK, LOUIS J. AND NOCENTI, MERO R; HORMONAL RESPONSES AND MECHANISMS INVOLVED IN THE POLYURIC-POLYDIPSIC SYN-DROME OF SALT DEFICIENT RABBITS (BORPOTA XOI); 12 MONTHS \$14,300 KIRSTEN, EDWARD B; PHYSIOLOGY AND PHARMACOLOGY OF MO. TION-MODULATED NEURONS (B029215 X02); 12 MONTHS \$22,500

SAWYER, WILBUR H; COMPARATIVE PHYSIOLOGY OF THE NEU-ROHYPOPHYSIS (BOJOS98 X00); 12 MONTHS \$30,000

GOLD, ALLEN M; MECHANISM OF MUSCLE PHOSPHORYLASE (BOJ1289); 24 MONTHS \$40,000

GRUNDFEST, HARRY, AND REUBEN, JOHN P. MECHANISMS OF CON-TRACTILE ACTIVITY IN MUSCLE (BOJISOT XOO); 12 MONTHS \$59,000

SPRINSON, DAVID B; BIOSYNTHESIS OF AROMATIC AMINO ACIDS AND REGULATION OF STEROID BIOSYNTHESIS IN EUKARYOTIC CELLS (BOJJ111 X00); 12 MONTHS \$30,000

### CORNELL UNIVERSITY-AGRICULTURAL EXPERIMENT STATION

ROSS, A F; INDUCED RESISTANCE AND VIRUS LOCALIZATION IN HYPERSENSITIVE PLANT HOSTS (BOIJSSS 001); 24 MONTHS 475,600

### CORNELL UNIVERSITY-MEDICAL COLLEGE

SUSSDORF, DIETER H; NON-THYMIC REGULATION OF MAMMALIAN IMMUNOCOMPETENCE (BO23937 001); 24 MONTHS 141,000

GREIF, ROGER L; ALKALINE RIBONUCLEASE AND ITS INHIBITOR IN RAT AND HUMAN THYROID (BOJ1109); 24 MONTHS \$38,900

### NEW YORK UNIVERSITY-SCHOOL OF MEDICINE

HEIDELBERGER, MICHAEL; RELATIONS BETWEEN CHEMICAL CON-STITUTION AND IMMUNOLOGICAL SPECIFICITY POLYSACCHARIDES AND NATURAL PROTEINS (BOIJS92 001); 24 MONTHS \$42,500

SILBER, ROBERT; NUCLEOTIDE REGULATION IN MAMMALIAN CELLS (B029622 X01); 12 MONTHS \$17,000

UNIVERSITY OF ROCHESTER-SCHOOL OF MEDICINE AND DENTISTRY JOSEPH, SHIRLEY A: TRANSDUCTION OF RELEASING HORMONES BY MEDIAN EMINENCE (BOJ111J); 12 MONTHS \$18,000

### YESHIVA UNIVERSITY-ALBERT EINSTEIN COLLEGE OF MEDICINE STRECKER, HAROLD J; CONTROL AND DEVELOPMENT OF ENZYMES

OF THE GLUTAMATE FAMILY (BOIZETT DOI); 24 MONTHS \$61,500



ETXIN, WILLIAM: THYROXINE ACTION IN AMPHIBIAN TISSUES (BOISSSS 001): 12 MONTHS \$25.700

LEV, MEIR; VITAMIN K METABOLISM IN THE K-REQUIRING BAC-TERIUM, FUSIFORMIS NIGRESCENS' (BOISSIO 001); 6 MONTHS \$4,500 WHITE, ABRAHAM; BIOCHEMICAL MECHANISMS OF CONTROL OF LYMPHOID TISSUE STRUCTURE AND FUNCTION (BOSISSE X00); 18 MONTHS \$40,000

#### NORTH CAROUNA

#### DUKE UNIVERSITY

KRAMER, PAUL J; WATER RELATIONS PROBLEMS IN PLANTS (BOSOSET X00); 18 MONTHS \$38,600

WILBUR, KARL M; SHELL REGENERATION IN MOLLUSCS (BOJJSE2); 12 MONTHS \$15,000

NAYLOR, AUBREY W; AMINO ACID AND PROTEIN METABOLISM IN PLANTS (BOSSIET); 24 MONTHS \$50,000

## NORTH CAROLINA STATE UNIVERSITY AT RALEIGH

DOBROGOS2, WALTER J; REGULATION OF CYCLIC AMP LEVELS IN "ESCHERICHIA COII AND THE ROLE OF CYCLIC AMP IN THE GROWTH AND METABOLISM OF THIS ORGANISM (BOISSIS 001); 24 MONTHS \$35,000

### UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

MILLER, AUGUSTUS T JR; STUDIES ON ANAEROBIC METABOLISM AND TRANSITIONAL METABOLIC STATES (BOISES X01); 12 MONTHS \$10,200

## DUKE UNIVERSITY SCHOOL OF MEDICINE

OTTOLENGHI, ATKOS; THE EOSINOPHILIC LEUKOCYTE- ITS DIS-TRIBUTION AND REGULATION IN HEMATOPOIETIC AND PERIPHERAL TISSUES (8080758 X01); 12 MONTHS \$32,600

## UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL-SCHOOL OF MEDICINE

PENNIALL, RALPH; SYNTHESIS OF CYTOCHROME OXIDASE IN MAM-MALIAN CELLS (BG11589 GO1); 7 MONTHS \$12,000

PEARLMAN, WILLIAM H; STEROID HORMONE-PROTEIN INTERAC-TIONS (B017191 DOI): 12 MONTHS \$26,000

#### OHO

### CASE WESTERN RESERVE UNIVERSITY

SABLE, HENRY 2; INTERACTION OF ENZYMES, COENZYMES, AND SUBSTRATES (8017091 001), 24 MONTHS \$55,000

DAVIS, STANLEY D. LONG TERM STUDIES ON HIBERNATION AND THERMOREGULATION USING RADIO-TELEMETRY AND RADIO-STIMU-LATION TECHNIQUES (8045644), 24 MONTHS \$34,700

### MIAMI UNIVERSITY

BHATTACHARJEE, JNANENDRA; GENETIC BASIS OF THE BIOSYNTHESIS OF LYSINE IN YEAST (BO38558 XOI): 12 MONTHS \$14,700

#### MUSKINGUM COLLEGE

QUINN, DAVID L; CONTROL OF GONADOTROPIN SECRETION. INTER-RELATIONS OF BRAIN, PITUITARY, AND GONADS (BO28524 X01); 12 MONTHS \$11,700

### OHIO STATE UNIVERSITY

CROSS, ELIZABETH L; MECHANISM OF PHOTOPHOSPHORYLATION-ACTION OF CATIONS ON THE HIGH-ENERGY STATES OF CHLOROPLASTS (B019136 001); 24 MONTHS \$40,000

### OHIO UNIVERSITY

JAFFE, MORDECA1 J; MECHANISM OF ACETYLCHOLINE ACTION IN PLANTS (BOJJEST); 24 MONTHS \$55,000

### UNIVERSITY OF DAYTON

GEIGER, DONALD R; VEIN LOADING AND TRANSLOCATION OF SUGARS IN HIGHER PLANTS (BOJJEOJ); 24 MONTHS \$39,800

#### OKLAHOMA

### UNIVERSITY OF OKLAHOMA

WENDER, SIMON H, AND SMITH, EDDIE C; STUDIES OF ENZYMES AS-SOCIATED WITH SCOPOLIN-SCOPOLETIN INTERCONVERSIONS (B014585 001): 24 MONTHS \$36,400

BEEVERS, LEONARD; PROTEIN METABOLISM IN THE COTYLEDONS OF 'PISUM SATIVUM' DURING DEVELOPMENT AND GERMINATION (B007518 001); 24 MONTHS \$30,000

#### OREGON

### OREGON STATE UNIVERSITY

MOORE, THOMAS C; PLANT HORMONE METABOLISM AND MECHANISM OF AUXIN ACTION (BOIS 193 001); 24 MONTHS \$35,000 LOOMIS. W DAVID; BIOSYNTHESIS AND METABOLISM OF TERPENES (BOSSS) 001); \$11,800

EVANS, HAROLD J; SYMBIOTIC NITROGEN FIXATION (B029600 X01); 12 MONTHS \$30,000

PARKS, LEO W; FUNCTION OF STEROLS IN THE METABOLISM OF SACCHAROMYCES CEREVISIAE (BOSILIE); 24 MONTHS \$30,000

LAYENDER, DENIS P. PHYSIOLOGY OF DORMANT DOUGLAS-FIR (P. SEUDOTSUGA MENZIESII) SEEDLINGS (BOJISOI), 24 MONTHS \$62,000

BISHOP, NORMAN I; ANALYSIS OF PHOTOSYNTHESIS THROUGH MU-TATION STUDIES (BOSSES X00); 12 MONTHS \$20,000

#### PORTLAND STATE UNIVERSITY

TAYLOR, W HERMAN; STRUCTURE AND FUNCTION OF ENEYMES IN THE PYRIMIDINE PATHWAY (BOSISOS); 24 MONTHS \$28,000

#### REED COLLEGE

STAFFORD, HELEN A; REGULATION AND ENZYMOLOGY OF C4-C3 COMPOUNDS IN 'SORGHUM' (B028527 X01); 12 MONTHS \$21,000

KLEINHOLZ, LEWIS H; PHYSIOLOGICAL SPECIFICITY OF NEU-ROSECRETORY HORMONES FROM THE CRUSTACEAN EYESTALK (BOSISOS X00); 12 MONTHO \$50,200

#### PENNSYLVANIA

#### ALBERT EINSTEIN MEDICAL CENTER

FRIEDMAN, HERMAN, ROLE OF NUCLEOPROTEINS IN ANTIBODY BIOSYNTHESIS (BO32147 X00): 12 MONTHS \$42,800

SUHADOLNIK, ROBERT J. BIOSYNTHESIS AND REGULATION OF THE NUCLEOSIDE ANTIBIOTICS (BOJ2222 XOO): 12 MONTHS \$29,500

#### BRYN MAWR COLLEGE

CONNER, ROBERT L, AND MALLORY, FRANK B; EFFECT OF STEROLS AND PENTACYCLIC TRITERPENE ALCOHOLS ON MEMBRANE LIPID COMPOSITION (BGS1944); 24 MONTHS \$35,000

#### BUCKNELL UNIVERSITY

HOFFMAN, DANIEL L; HORMONAL INDUCTION OF RNA SYNTHESIS IN NEUROSECRETORY CELLS OF DECAPOD CRUSTACEA (BOSISTA); 12 MONTHS \$9,600

### LEHIGH UNIVERSITY

MALSBERGER, RICHARD G; VIRAL DISEASES OF FISH (B01204) 001); 12 MONTHS \$20,000

### PENNSYLVANIA HOSPITAL

ZACKS, SUMMER I; CHEMICAL AND PHYSICOCHEMICAL PROPERTIES OF MYOFIBER AND SCHWANN CELL BASEMENT LAMINA IN THE NEUROMUSCULAR JUNCTION (BOJIS4); 24 MONTHS \$55,000

#### PENNSYLVANIA STATE UNIVERSITY

DUNSON, WILLIAM A; IONIC REGULATION AND THERMAL TOLERANCE IN SEA SNAKES (BOISSIS 001); 24 MONTHS \$40,000

CLAUS, GEORGE W; NITROGEN METABOLISM IN 'ACETOBACTER SU. BOXYDANS' (BOITUS 001); & MONTHS 45,300

HYMER, WESLEY C. HYPOTHALAMIC CONTROL OF THE ANTERIOR PITUITARY (BOSSES), 24 MONTHS \$40,000

### UNIVERSITY OF PENNSYLVANIA

PEACHEY, LEE D; CELLULAR MECHANISMS OF MUSCLE CONTRACTION AND OF ANTIDIURETIC AND STEROID HORMONE ACTION (BOOSSTS XOS); 12 MONTHS \$60,000

BAILE, CLIFTON A, AND KARE, MORLEY R; NEURAL, METABOLIC AND BEHAVIOR ASPECTS OF THE CONTROL OF FEED INTAKE OF RU-MINANTS (B028846 001); 24 MONTHS \$65,000

UNIVERSITY OF PENNSYLVANIA-SCHOOL OF VETERINARY MEDICINE WOLF, BENJAKIN; INDUCTION OF ANTIBODY FORMATION IN SINGLE CEILS ORIGINALLY EXPRESSING TWO ALLELO ALLOTYPIC IMMUNOGLOBULINS (BO28661 X01); 12 MONTHS \$33,200

### **RHODE ISLAND**

### BROWN UNIVERSITY

BIGGINS, JOHN; RESPIRATION AND PHOTOSYNTHESIS IN ALGAE AND PLANTS (BOSSIJA XOI); 12 MONTHS \$13,900

GOLDSTEIN, LEON; REGULATION OF NITROGEN METABOLISM IN FISH AND AQUATIC AMPHIBIA (BOJOJST X00); 12 MONTHS \$19,000 DOWBEN, ROBERT M: MEMBRANE PROTEINS AND MODELS (BOJOSOS

X00); 12 MONTHS \$31,100

SENFT, ALFRED W; STUDIES IN THE PHYSIOLOGY AND BIOCHEMISTRY OF SCHISTOSOMES (BOJOSIE); 24 MONTHS \$61,800

#### SOUTH CAROUNA

### CLEMSON UNIVERSITY

POWELL, CARY L: STRINGENT AND RELAXED CONTROL OF PHOSPHOLIPID SYNTHESIS (BOJO072); 24 MONTHS \$18,200

#### SOUTH DAKOTA

### SOUTH DAKOTA STATE UNIVERSITY

KENEFICK, DONALD G; GROWTH REGULATION IN WINTER ANNUALS BY TEMPERATURE (BOJIIIG): 24 MONTHS \$12,800

#### TENNESSEE

#### TENNESSEE STATE UNIVERSITY

HOGO, RICHARD ALLEN; BLACK COLLEGES (FOUR-YEAR) (Y010416); 29 MONTHS \$35,500

### UNIVERSITY OF TENNESSEE MED UNITS AT MEMPHIS

MANTHEY, ARTHUR A; DESENSITIEATION AT THE NEURO-MUSCU-LAR JUNCTION (BOJZOS); 12 MONTHS \$12,000



#### UNIVERSITY OF TENNESSEE, KNOXVILLE

MONTIE, THOMAS C; STRUCTURE, SYNTHESIS AND REGULATION OF THE PROTEIN TOXINS OF PASTEURELLA PESTIS (BOIRERS DOI); 8 MONTHS \$7,000

#### VANDERBILT UNIVERSITY

TOUSTER, OSCAR; B-GLUCURONIDASE AND THE BIOSYNTHESIS OF LYSOSOMES (BOSSISS X00): 12 MONTHS \$41,700

### VANDERBILT UNIVERSITY SCHOOL OF MEDICINE

HURWITZ, LEON; DRUG RECEPTORS AND RESPONSE IN SMOOTH MUSCLE (Borssie oct); 24 MONTHS \$58,900

WAGNER, CONRAD, METABOLISM OF ONE-CARBON UNITS (BOILES X00), 12 MONTHS \$15,400

#### TEXAS

### BAYLOR COLLEGE OF MEDICINE

DRESDEN, MARC H; COLLAGEN METABOLISM DURING DEVELOP-IENT OF THE REGENERATING AMPHIBIAN LIMB (BOJ2914); 24 MONTHS \$28,000

### SOUTHWEST POUNDATION FOR RESEARCH & EDUCATION

RAGINO, NOBUYOSHI; A STUDY OF NEURAL CONTROL OF OVULA. TION (BOSESTI XOI); 12 MONTHS \$92,200

#### TEXAS A & M UNIVERSITY

ROBLLER, HERBERT A, AND DAHM, KARL H; BIOCHEMISTRY OF IN-SECT DEVELOPMENT: STUDIES ON THE JUVENILE HORMONE (B00794) 001); \$ MONTHS \$26,500

MORGAN, PAGE W; ETHYLENE-AUXIN ROLES IN PLANT REGULATO. RY SYSTEMS (BOS 1304); 24 MONTHS \$30,000

ROELLER, HERBERT A: STUDIES ON INSECT HORMONES AND PHEROMONES (BOSSISS X00): 12 MONTHS \$154,000

#### LNIV OF TEXAS AT AUSTIN

THOMPSON, GUY A IR; MEMBRANE SYNTHESIS AND THE ROLE OF ETHER-CONTAINING LIPIDS (BOISIS) 001); 24 MONTHS \$32,000

### UNIV OF TEXAS MEDICAL SR AT GALVESTON

RIGDON, R H; A MECHANISM OF CHEMOTAXIS (EQJIPPO); 24 MONTHS \$34,500

## Univ of texas southwestern med sch at dallas

SULKIN, S EDWARD, STUDIES ON INAPPARENT AND LATENT VIRAL INFECTIONS STUDIES ON TEMPERATURE INDUCED ALTERATIONS IN ANIMAL VIRUSES (BOJO714 X00): 12 MONTHS \$23,000

### UNIVERSITY OF HOUSTON

HAZELWOOD, ROBERT L; CONTROL OF INSULIN RELEASE FROM THE PANCREAS (BOOSIST 001); 24 MONTHS \$35,000

#### VIRGINIA

### VIRGINIA COMMONWEALTH UNIVERSITY

PHIBBS, PAUL V; CARBOHYDRATE UTILIZATION BY 'PSEUDOMONAS' (B0/09/4); 84 MONTHS \$29,400

MILLS, RICHARD R; PHYSIOLOGY AND BIOCHEMISTRY OF THE SCLEROTIZATION PROCESS IN INSECTS (BOJ1376); 24 MONTHS 433,900

#### VIRGINIA POLYTECHNIC INSTITUTE

COCKRAN, DONALD G: NITROGEN EXCRETION AND ASSOCIATED BIOCHEMICAL PATHWAYS (BOJ4141); 24 MONTHS \$30,000

### WASHINGTON AND LEE UNIVERSITY

HICKMAN, CLEVELAND P; GLOMERULAR-TUBULAR INTERACTIONS IN THE FISH RIDNEY (B017918 001); \$2,300

HICKMAN, CLEVELAND P JR, STUDIES OF RENAL GLOMERULAR FUNCTION IN FISH (BOITOIS 002), 24 MONTHS \$35,000

#### UNIVERSITY OF VIRGINIA-SCHOOL OF MEDICINE

WAGNER, ROBERT R; THE INTERFERONS- CELLULAR REGULATORS OF VIRAL INFECTION (BOOKS 17 XO4); \$2,000

#### VIRGINIA COMMONWEALTH UNIVERSITY-HEALTH SCIENCES DIVISION

BOND, JUDITH S; RELATIVE STABILITIES OF ENZYMES IN VITRO AND IN VIVO (BOJ1114); 24 MONTHS \$31,000

### EASTERN WASHINGTON STATE COLLEGE

LANG. BRUCE 2; MECHANISM OF IMMUNITY OF HELMINTH PARASITES (B031745); 12 MONTHS \$10,000

### UNIVERSITY OF WASHINGTON

MARTIN, ARTHUR W; COMPARATIVE PHYSIOLOGY OF CEPHALOPOD REPRODUCTION AND EXCRETION, AND OF ARACHNID CIRCULATION (B017339 001); 24 MONTHS \$48,000

FARNER, DONALD S; CONTROL OF REPRODUCTIVE AND OTHER PHYSIOLOGIC CYCLES (BO28080 XOI), 12 MONTHS \$27,400

### WASHINGTON STATE UNIVERSITY

HIGINBOTHAM, NOE; ELECTROGENESIS AND ION TRANSPORT IN HIGHER PLANT CELLS (8019201 001); 24 MONTHS \$38,000

SHUMWAY, LEWIS K, AND RYAN, CLARENCE A JR; SITES OF PROTEIN SYNTHESIS, STORAGE AND RECALL IN PLANT CELLS (BOSPS11 XOI); 12 HONTHS \$12,700

SCHEIBE, JOSEPH, A PHOTOREVERSIBLE PIGMENT IN THE BLUE-GREEN ALGAE (BOJJS6J); 24 MONTHS \$30,000

#### WISCONSIN

### MEDICAL COLLEGE OF WISCONSIN

ANKEL, HELMUT K; BIOSYNTHESIS OF CELL WALL GLYCOPROTEINS AND POLYSACCHARIDES (BOISOSO OOI); 24 MONTHS \$45,000

#### UNIVERSITY OF WISCONSIN, MADISON

BOCK. ROBERT M; BIOCHEMICAL AND BIOPHYSICAL INVESTIGA-TIONS OF PROTEIN SYNTHESIS (BOOGSS) XOI); 18 MONTHS \$30,700

DE ZOETEN, Q A, AND KEMP, J D; STUDIES ON A TUMOROGENIC PLANT VIRUS (B015381 001); 12 MONTHS \$12,000

PORTER, W P, MITCHELL, J W. AND BECKMAN, W A; ENERGY BUDGETS, MICROMETEOROLOGY AND PREDATOR PREY INTERAC-T/ONS (BOJIO434); 12 MONTHS \$5,000

MCSHAN, W H; OVINE PITUITARY FOLLICLE STIMULATING HOR. MONE (BOJ1114); 24 NON THE \$47,600

ALLEN, PAUL J. CONTROL OF DEVELOPMENT IN THE RUST FUNGI (BOJ1451 X00): 12 MONTHS \$48,900

SEQUEIRA, LUIS, AND KELMAN, ARTHUR; PHYSIOLOGY OF INDUCED RESISTANCE IN PLANTS (BOJISSI): 24 MONTHS \$66,300

BECK, STANLEY D; INSECT-PLANT INTERACTIONS (BOSISSO X00); 12 MONTHS \$23,400

KOZLOWSKI, THEODORE T; ROLE OF COTYLEDONS IN ESTABLISH-MENT AND GROWTH OF SEEDLINGS OF WOODY PLANTS (BOJESSI); 24 MONTHS \$30,200

HANSON. R S; REGULATION OF TERMINAL RESPIRATION IN BAC-TERIA (POISSI) 001); 24 MONTHS \$38,000

### University of Wisconsin, Madison Medical School

BALISH, EDWARD; BIOCHEMICAL BASIS FOR THE MORPHOGENESIS OF A PATHOGENIC YEAST (BOJOTTO X00); 12 MONTHS \$17,500

### UNIVERSITY OF WISCONSIN, PARKSIDE-KENGSHA BRANCH

CHEN, CHONG-MAW; STUDIES ON THE MECHANISM OF ACTION OF CYTOKININ IN GROWTH AND CELL DIVISION (BOSJSEI): 24 MONTHS \$34,000

### MOLECULAR BIOLOGY

#### **ALABAMA**

### UNIVERSITY OF ALABAMA IN BIRMINGHAM

URRY, DAN W; STUDIES ON THE CONFORMATION OF NATURALLY OCCURRING POLYPEPTIDES AND THE RELATIONSHIP OF CONFORMA-TION TO FUNCTION (BOSISSS); 24 MONTHS \$50,000

#### UNIVERSITY OF ALABAMA IN BIRMINGHAM-MEDICAL COLLEGE OF ALABAMA

BENNETT, J CLAUDE J; SEQUENCE ANALYSIS OF THE H CHAIN OF JOM AND STRUCTURAL COMPARISON WITH IMMUNOGLOBULIN FROM LOWER ANIMALS (BO27167 X01); 12 MONTHS \$24,200

ANDREOLI, THOMAS E, AND SCHAFER, JAMES A: TRANSPORT PHENOMENA IN LIPID BILAYER MEMBRANES AND ISOLATED, PER-FUSED RENAL TUBULES (BOSITES X00); 12 MONTHS \$30,000

### ARIZONA

#### UNIVERSITY OF ARIZONA

WYCKOFF, RALPH W G, PHYSICAL METHODS OF MICROANALYSIS OF BIOLOGICAL MATERIALS (BOI7516 001); 24 MONTHS \$35,000

SIEGEL, ALBERT; AN ANALYSIS OF PLANT DNA (BOSTISE 001); 12 MONTHS \$20,000

CUSANOVICH, MICHAEL A; MECHANISM OF BIOLOGICAL ELECTRON TRANSPORT (BOJOJJE); 24 MONTHS \$40,000

HRUBY, VICTOR J; STRUCTURAL STUDIES OF SYNTHETIC HOR-MONES AND POLYPEPTIDES (BOJOTIE XOO); 12 MONTHS \$15,000

#### **ARKANSAS**

## UNIVERSITY OF ARKANSAS-UNIVERSITY OF ARKANSAS MEDICAL

YORK, J LYNDAL; CHEMISTRY OF THE ACTIVE SITE OF HEMERYTHRIN (BOJO7 & XOO); 12 MONTHS \$20,000

#### CALIFORNIA

### CASS FORNIA INSTITUTE OF TECHNOLOGY

DELBRUCK, MAX; SENSORY TRANSDUCER MECHANISMS (B026636 X01); 12 MONTHS \$50,000

DICKERSON, RICHARD E, AND STANFORD, RICHARD H JR; STRUC-TURE TURE AND FUNCTION OF PROTEINS AND RELATED MACROMOLECULES (B0280# X01); 12 MONTHS \$80,000

STRAUSS, JAMES H; STRUCTURE AND REPLICATION OF SINDBIS VIRUS (BOS1765 X00); 12 MONTHS \$35,000



POMONA COLLEGE

COHEN, LARRY W. BACTERIOPHAGE INDUCED CELL LYSIS (BOJITT): 12 MONTHS \$10,000

### SALK INSTITUTE FOR BIOLOGICAL STUDIES

ORGEL, LESLIE E; BIOCHEMICAL EVOLUTION (BOHIST 001); \$4,900 HOLLEY, ROBERT W: MOLECULAR BASIS OF THE CONTROL OF CELL DIVISION IN MAMMALIAN CELLS (BOILD) X00); 12 MONTHS \$60,000

#### SCRIPPS CLINIC AND RESEARCH FOUNDATION

DANDLIKER, WALTER B. AND LEVISON, STUART A; FAST REACTION RATE STUDIES OF ANTIGEN-ANTIBODY SYSTEMS BY FLUORESCENCE METHODS (BOISSEL 001); \$ MONTHS \$2,600

#### STANDARD INTURREITY

CLAYTON, DAVID A; MITOCHONDRIAL DNA IN HUMAN MALIGNANT CELLS (BO26117 001); 12 MONTHS \$21,000

MCCONNELL, HARDEN M. LATERAL DIFFUSION AND PHASE SEPARATIONS IN BIOLOGICAL MEMBRANES (BOSSO) X00); 12 MONTHS \$63,000

#### UNIVERSITY OF CALIFORNIA, BERKELEY

PACKER, LESTER; FUNCTION OF SUBCELLULAR MEMBRANES (B010051 001); 12 MONTHS \$30,000

PARK, RODERIC B; CHLOROPLAST MEMBRANE DIFFERENTIATION (B045579 X01): 12 MONTHS \$30,000

CARPENTER, FREDERICK H: MECHANISM OF ACTION OF LEUCINE AMINO PERTIDASE (BOSTSTS ONI): 12 MONTHS \$12,500

KOSHLAND, DANIEL & JR: CATALYTIC POWER OF ENZYMES (BOJOPOP X00); 12 MONTHS \$25,000

FRAENKEL-CONRAT, HEINZ L; CHEMICAL AND BIOCHEMICAL STU-DIES ON VIRAL RNAS AND PROTEIN (BOJEJST): 24 MONTHS \$100,000 SCHACHMAN, HOWARD K; FUNCTIONAL ASPECTS OF THE QUARTER-

NARY STRUCTURE OF PROTEINS (BOSSAIZ XOO); 12 MONTHS \$45,000 SCHACHMAN, HOWARD K; PURCHASE OF AN AUTOMATIC SPLIT BEAM DIGITALIZED PHOTOELECTRIC SCANNER FOR THE ULTRACEN. TRIFUGE (BOJISSI): 12 MONTHS \$32,500

#### UNIVERSITY OF CALIFORNIA, DAVIS

DOI, BOY H; CONTROL MECHANISMS IN BACTERIAL DIFFERENTIA-TION (B014109 X01); 12 MONTHS \$30,000

MURPHY, TERENCE M; PHOTOREPAIR OF UV-DAMAGED PLANT CELL RNA (BOJOJ17); 24 MONTHS \$38,000

DEAMER, DAVID W: LIPID AND PROTEIN IN MEMBRANES (BOJESSI); 24 MONTHS \$42,000

#### UNIVERSITY OF CALIFORNIA, INVINE

MOLDAVE, KIVIE; THE CONTROL OF RNA SYNTHESIS AND ITS RELA-TIONSHIP TO PROTEIN SYNTHESIS (BOJOLJI); 12 MONTHS \$8,000

GORDON, CHARLES N: ELECTRON MICROSCOPY OF DNA BY THE ALUMINUM-MICA TECHNIQUE (BOJ2507); 12 MONTHS \$6,000

### UNIVERSITY OF CALIFORNIA, LOS ANGELES

GLITZ, DOHN G: STRUCTURE AND FUNCTION IN RIBONUCLEASES (B021608 001); 24 MONTHS \$42,000

BRUNK, CLIFFORD F: A GENERAL SYSTEM FOR SEQUENCING DNA (B030314); 24 MONTHS \$55,000

ECKERT, ROGER; BIOELECTRIC AND MOLECULAR STUDIES OF GENETICALLY MODIFIED EXCITABLE MEMBRANES (BOJOISS X00); 12 MONTHS \$27,300

ECKERT, ROGER; BIOELECTRIC AND MOLECULAR STUDIES OF GENETICALLY MODIFIED EXCITABLE MEMBRANES (BOJOLOS XOI); 18,200

COLLIER, R JOHN, AND DELANGE, ROBERT J. AMINO ACID SEQUENCE OF FRAGMENT 'A' FROM DIPHTHERIA TOXIN (BOJ2404): 24 MONTHS \$40,000

#### UNIVERSITY OF CALIFORNIA, RIVERSIDE

DUNN, MICHAEL F; ENZYME CATALYSIS (BOILISI): 84 MONTHS \$20,000

#### UNIVERSITY OF CALIFORNIA, SAN DIEGO

XUONG, NGUYEN-HUU. AND VERNON, WAYNE: HIGH SPEED DATA COLLECTION SYSTEM FOR PROTEIN CRYSTALLOGRAPHY (BORJOSS 001); 12 MONTHS \$18,500

ELOYSON, JOHN; CHLOROSULFOLIPIDS, A NOVEL MEMBRANE CON-STITUENT (BOISEIS XOI); 12 MONTHS \$20,000

GOODMAN, MURRAY; SYNTHESIS, PROPERTIES AND REACTIONS OF

PEPTIDES AND THEIR DERIVATIVES (BO28161 001); 8 MONTHS \$25,000 GOODMAN, MURRAY; SYNTHESIS, PROPERTIES AND REACTIONS OF PEPTIDES AND THEIR DERIVATIVES (BO28467 002); \$19,000

HAYASHI, MASAKI; TEMPLATE ACTIVITIES OF INTRACELLULAR BACTERIOPHAGE DNA (BOZDI TO XOI); 12 MONTHS \$45,000

BROWN, WILLIE C: ANALYSIS OF AUTOLYSINS DURING NORMAL AND ABNORMAL GROWTH (BOJO238 X00): 12 MONTHS \$25,000

KRAUT, JUSEPH, THREE-DIMENSIONAL STRUCTURE AND FUNCTION OF BIOLOGICAL MACROMOLECULES (BOJOSES X00): 12 MONTHS \$40,000 GEORGE; PROMARY PROCESSES IN BACTERIAL PHOTOSYNTHESIS (BOJJJI to XOO); 12 MONTHS \$30,000

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

GOODMAN, JOEL W; DELINEATION OF THE CARRIER AND HAPTENIC DETERMINANTS OF SMALL IMMUNOGENIC POLYPEPTIDES OF DEFINED STRUCTURE (BOSTS ST. OCI); 12 MONTHS \$10,000

#### UNIVERSITY OF CALIFORNIA, SANTA BARBARA

BRUICE, THOMAS C: MECHANISMS OF COFACTOR CATALYZED REACTIONS (BOJ1134 X00); 12 MONTHS \$35,000

GEORGE: STRUCTURE AND REACTIVITY TABORSKY. PHOSPHOPROTEINS AND INTERACTIONS IN PROTEIN-PHOSPHATE SYSTEMS (BOSIATI); 24 MONTHS \$40,000

#### STANFORD UNIVERSITY SCHOOL OF MEDICINE

KORNBERG, ARTHUR, BIOCHEMISTRY OF SPORULATION AND MEM-

BRANG DEVELOPMENT (BOO111 Xos): 12 MONTHS \$48,000 LOEW, GILDA H, AND LEDERBERG, JOSHUA; ELECTRONIC AND MAG-NETIC PROPERTIES OF HEME PROTEINS, AND FERREDOXINS (BO1788) 001); 6 MONTHS \$8,000

LOEW, GILDA HARRIS, AND LEDERBERG, JOSHUA; QUANTUM CHEMICAL INVESTIGATIONS OF HEME PROTEINS, FERREDOXINS LYSOZYME AND A SERIES OF MUSCARINIC AGONISTS (BOITERO DOZ): 18 MONTHS \$40,000

JARDETZKY, OLEG; NUCLEAR MAGNETIC RESONANCE STUDIES OF CONFORMATIONAL TRANSITIONS IN MACROMOLECULES (BOSTORS XOC); 12 MONTHS \$60,000

#### UNIVERSITY OF CALIFORNIA, IRVINE-CALIFORNIA COLLEGE OF MEDICINE

SYPHERD, PAUL S. STRUCTURE AND ASSEMBLY OF RIBOSOMES (BO23579 001); 24 MONTHS \$48,000

G WESLEY: METABOLIC INTERRELATIONSHIPS HATFIELD. BETWEEN ENZYME MATURATION, ENZYME REGULATION AND GENE EXPRESSION (BOSTALS COLD: 12 MONTHS \$20,000

UNIVERSITY OF CALIFORNIA, LOS ANGELES BIOMEDICAL PROJECT THORNBER, J PHILIP: THE NATURE OF CHLOROPHYLL IN VIVO (B011207): 24 MONTHS \$40,000

University of California, los angeles-school of Medicine EISENMAN, GEORGE: THE MOLECULAR BASIS OF ION TRANSPORT ACROSS PHOSPHOLIPID MEMBRANES (BOJOSJA X00): 12 MONTHS \$50,000

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO-SCHOOL OF MEDICINE MORALES, MANUEL F; CONTRACTILE SYSTEMS (BONDS: XOI): 12 MONTHS \$20,000

UNIVERSITY OF CALIFORNIA, SAN DIEGO REVELLE COLLEGE DENNIS, EDWARD A: PHYSICAL STATE AND BIOLOGICAL ACTIVITY OF PHOSPHOLIPIDS (B018034 001); 24 MONTHS \$40,000

### COLORADO

### COLORADO STATE UNIVERSITY

AZARI, PARVIZ; COMPOSITION AND SEQUENCE OF AMINO ACIDS AT THE METAL-BINDING SITES OF OVOTRANSFERRIN (BOJO956); 24 MONTHS \$16,900

### UNIVERSITY OF COLORADO

BERG, HOWARD C; MOLECULAR BASIS FOR SENSORY TRANSDUC-TION IN BACTERIA (BOJOJJ7); 24 MONTHS \$50,000

GOLD, LAWRENCE M; TRANSLATIONAL MODULATION DURING TAIN-FECTION (B030317): 24 MONTHS \$18,000

#### UNIVERSITY OF COLORADO-DENVER MEDICAL CENTER

MILLETTE, ROBERT L: MECHANISM AND CONTROL OF GENE TRANS-CRIPTION (B023356 001); \$3,000

PETTIJOHN, DAVID E: INITIAL EVENTS IN THE TRANSFER OF GENETIC INFORMATION (BOSTO) X01); 12 MONTHS \$20,000

#### CONNECTICUT

### CONNECTICUT AGRICULTURAL EXPERIMENT STATION

HANSON, KENNETH R; PHENYLALANINE AMMONIA LYASE IN RELA-TION TO PHENYLPROPANOID METABOLISM IN HIGHER PLANTS (B029021 X01); 12 MONTHS \$25,000

#### UNIVERSITY OF CONNECTICUT

OZOLS, JURIS; DETERMINATION AND INFERENCES OF PROTEIN SEQUENCES (B023062 001); \$1,800

REGELES, GERSON, KINETICS OF MACROMOLECULAR REACTIONS (B029011 X01); 12 MONTHS \$30,000

LUCAS-LENARD, JEAN; STUDIES ON MENGOVIRUS INFECTED L-CELLS (B030475 X00), 12 MONTHS \$30,000

YPHANTIS, DAVID A: ULTRACENTRIFUGE STUDIES OF PROTEINS AND THEIR INTERACTION (BOJOSES XOO): 12 MONTHS \$65,000

SCHUSTER, TODD M, AND YPHANTIS, DAVID A; KINETICS AND MECHANISMS OF MACROMOLECULAR INTERACTIONS USING QUASI-ELASTIC LIGHT SCATTERING (BOJ1097 X00); 12 MONTHS \$20,000

#### YAL'S UNIVERSITY

STRYER, LUBERT; OPTICAL STUDIES OF ORGANIZED BIOLOGICAL ASSEMBLIES (BO21408 XOI); 12 MONTHS \$40,000



WANG, JUI H; MOLECULAR MECHANISM OF PRIMARY ENERGY CON-VERSION (8030174 X00), 12 MONTHS \$25,000

ENGELMAN, D M; THE MOLECULAR STRUCTURE OF BIOLOGICAL MEMBRANES (BOSPOSS); 24 MONTHS \$50,000

#### YALE UNIVERSITY-SCHOOL OF MEDICINE

COLEMAN, JOSEPH E; ELECTRONIC AND MAGNETIC PROPERTIES OF MACROMOLECULES (B013)14 (001); 24 MONTHS \$34,000

MAGEE, PAUL TI REGULATION OF ISOLEUCINE VALINE BIOSYNTHE-SIS IN YEAST (BOXO114): 24 MONTHS \$25,000

#### UNIVERSITY OF CONNECTICUT-HEALTH CENTER

OZOLS, JURIS: DETERMINATION AND INFERENCES OF MICROSOMAL PROTEIN SEQUENCES (BORJON 008); 24 MONTHS \$82,000

TANZER, MARVIN L; COLLAGEN BIOSYNTHESIS, SECRETION AND CROSSLINKING (BOSIOTY): 24 MONTHS \$20,000

#### DISTRICT OF COLUMBIA

#### GEORGETOWN UNIVERSITY

STEINHARDT, JACINTO; EFFECTS OF PROTEIN INTERACTIONS ON PROTEIN STABILITY (BOISSEI 201); 24 MONTHS \$60,000

#### FLORIGA

#### FLORIDA STATE UNIVERSITY

HOMANN, PETER H; FUNCTION AND ORGANIZATION OF PHOTOSYSTEM II IN MANGANESS DEFICIENT, FRAGMENTED AND MUTANT CHLOROPLASTS (BOILEO) GOI); 3 MONTHS \$1,800

DE KLOET, S R; RNA SYNTHESIS IN YEAST (BOJISPO); 24 MONTHS

#### UNIVERSITY OF FLORIDA

HIEBERT, ERNEST, AND PURCIFULL, DAN E: PROPERTIES AND FUNCTION OF INCLUSIONS ASSOCIATED WITH POTATO VIRUS Y GROUP OF PLANT VIRUSES (8032093): 24 MONTHS \$38,000

ALLEN, CHARLES M JR; BIOSYNTHESIS OF POLYISOPRENOL PYROPHOSPHATES (BOJING): 24 MONTHS \$32,000

#### UNIVERSITY OF FLORIDA COLLEGE OF MEDICINE

CHUN. PAUL W; COAT PROTEIN SUBUNIT ASSOCIATION AND SELF-ASSEMBLY OF ROD-SHAPED FD-VIRUS (803823) 001); 12 NONTHS \$22,500

#### UNIVERSITY OF MIAMI-SCHOOL OF MEDICINE

THORHAUG, ANITRA; EFFECT OF TEMPERATURE AND TEMPERA-TURE GRADIENTS ON THE LIVING MEMBRANE SYSTEM AND CELLU-LAR DYNAMICS (BOJJIII); 24 MONTHS \$35,000

#### GEORGIA

#### EMORY UNIVERSITY

SOPHIANOPOULOS, ALKIS J; CONFORMATION, INTERACTIONS AND FUNCTION OF PROTEINS (BOITEW 601); 24 MONTHS \$52,000

#### UNIVERSITY OF GEORGIA

INMAN, FP; STRUCTURE AND BIOSYNTHESIS OF IMMUNOGLOBULIN M (IGM) (BOOS149 001); 24 MONTHS \$45,000

BREWER, JOHN M. LJUNGDAHL, LARS G. AND NEECE, SUE H; MOLECULAR BASIS OF THERMAL STABILITY OF ENZYMES (BOIJOJI 001): 24 MONTHS \$40,000

#### HAWAII

### UNIVERSITY OF HAWAIL

YASUNOBU, KERRY T; CHEMISTRY AND MECHANISM OF ACTION OF THE AMINE OXIDASES (B018749 001); 24 MONTHS \$35,000

#### ILLINOIS

#### CHICAGO MEDICAL SCHOOL

MARTIN, CHARLES J; FUNCTIONAL GROUPS AND THE ACTIVE SITE OF THE CHYMOTRYPSINS (BOJ1474); 24 MONTHS \$40,000

#### NORTHWESTERN UNIVERSITY

KLOTZ, IRVING M; PROTEIN INTERACTIONS (8007122 X03); 12 MONTHS \$35,500

STUTZ, ERHARD: EUGLENA GRACILIS CHLOROPLAST DNA (BOIDID): 24 NONTHS \$39,000

DUMAS, LAWRENCE B; REPLICATION OF VIRUS 0X171 DNA (B012887 001): \$10,000

LOACH, PAUL A: CHARACTERIZATION OF PHOTORECEPTOR SUBU-NITS (BORTIJE XOI): 12 MONTHS \$18,000

NITS (BOTTIS) ACT), IE MONTHS \$18,000

SPRINGER, GEORG F, SUBSTANCES WITH BLOOD-GROUP SPECIFICITIES IN MICROBES AND HIGHER PLANTS: THEIR NATURE AND THEIR

MODE OF INTERACTION WITH ANTIBODIES (BO27514 601); \$10,000 CZERLINSKI, GEORGE R; ACTION OF EFFECTORS UPON THE FORMS OF CYTOCHROME 'C' (B022012) 001); 24 MONTHS \$40,000

WU, TALTE; STRUCTURES OF VARIABLE REGIONS OF ANTIBODIES (BOSILIS), 24 MONTHS \$14,000

KAT2, JOSEPH J, AND LOACH, PAUL A: CONFERENCE ON THE PRI-MARY PHOTOCHEMISTRY OF PHOTOSYNTHESIS (BOSISTE): 12 MONTHS \$2,000

#### UNIVERSITY OF CHICAGO

LAW, JOHN H; INSECT BIOCHEMISTRY (BOOSISS 008); 24 MONTHS \$30,100

EPSTEIN, WOLFGANG; ION TRANSPORT ACROSS CELL NEMBRANES (BOOM 100 100 1): 24 MONTHS \$35 100

KAISER. EMIL THOMAS: CATALYTIC ACTION OF PEPSIN (BOISES 001); 24 MONTHS \$40,000

HASELKOAN, ROBERT; BLUE GREEN ALGAE- MUTANTS, VIRUSES, AND TRANSDUCTION (BOILS), 12 MONTHS \$12,500

ROIZMAN, BERNARD; VIRUS EXPRESSION IN MAMMALIAN CELLS (BOSTIJIS XOS). 12 MONTHS \$14,000

ROIZMAN, BERNARD; VIRUS EXPRESSION IN MAMMALIAN CELLS (BOIZESE XOS): 12 MONTHS \$16,000

KINGDON, HENRY S, AND HEINRIKSON, ROBERT L; PRIMARY STRUCTURE OF E. COLI GLUTAMINE SYNTHETASE (BOX1300 001); 12 MONTHS \$20,000

SIGLER, PAUL B; CRYSTALLOGRAPHIC STUDY OF THE STRUCTURE OF TRANSFER RNA (Boites) X01); 12 MONTHS \$35,000

ZWICK, MARTIN; THEORETICAL CRYSTALLOGRAPHY OF MACROMOLECULES (BORTOR XXI): 12 MONTHS \$25,000

CHAPMAN, DAVID J; BICCHEMISTRY OF PHOTOACTIVE PIGMENTS (B027888 001); 12 MONTHS \$15,000

WESTLEY, JOHN; CHEMISTRY OF ENZYMIC CATALYSIS (BORROLT XOI); 12 MONTHS \$40,000

#### UNIVERSITY OF ILLINOIS AT THE MEDICAL CENTER

TAO, MARIANO, THE ROLE OF ADENOSINE #.#-CYCLIC MONOPPOSPHATE IN MICROORGANISMS (BOSTASS 601); 12 MONTHS

#### UNIVERSITY OF ILLINOIS AT URBANA

KAPLAN, SAMUEL: INDUCTION OF BACTERIAL CHROMATOPHORE FORMATION (B014966 004); 24 MONTHS \$40,000

WOESE, CARL R; PHYLOGENY AND EVOLUTION OF RIBOSOMAL RNAS (B010200 001): 24 MONTHS \$18,800

MACLEOD, RODERICK: ANALYSES OF TWO SEROTYPES OF A PLANT RHABDOVIRUS IN INSECT MONOLAYER CULTURES (BOITERS 001); 24 MONTHS \$38,000

MERKELO, HENRY; DETERMINATION OF THE RATES OF THE PRIMARY PROCESSES OF PHOTOSYNTHESIS AND OF THE INFLUENCE OF ENVIRONMENTAL CONDITIONS ON ENERGY TRANSPORT IN THE PHOTOSYNTHETIC UNIT (BORROS) COI); 12 MONTHS \$15,000

SYBESMA, CHRISTIAAN; PRIMARY ENERGY CONSERVATION IN PHOTOSYNTHESIS (8030619 X00); 12 MONTHS \$29,000

HAGER, LOVELL P; BIOLOGICAL HALOGENATION MECHANISMS (BOJO754 X00): 12 MONTHS \$40,000

CAMPBELL, L LEON; METABOLIC STUDIES ON SULFATE-REDUCING BACTERIA (BOJ2290 X00); 12 MONTHS \$25,000

### INDIANA

#### PURDUE UNIVERSITY

ARONSON, ARTHUR I; BIOSYNTHESIS OF BACTERIAL SPORES AND THE REGULATION OF RELATED PROCESSES (BO20765 001); 24 MONTHS \$56,000

CRANE, FREDERICK L; COMPARATIVE BIOCHEMISTRY OF PLASTOQUINONES (BOX7501 001); 12 MONTHS \$10,000

GILHAM, PETER T, AND WIEBERS, JOYCE L; SEQUENCE ANALYSIS OF POLYNUCLEOTIDES AND NUCLEIC ACIDS BY MASS SPEC-TROMETRY AND GAS CHROMATOGRAPHY (BOZZIPS 001); 12 MONTHS \$25,000

RAY, WILLIAM J JR; THE MECHANISM OF THE PHOSPHOGLUCOMU-TASE REACTION (BO29173 X01); 12 MONTHS \$28,500

KOFFLER, HENRY, AND SMITH, R W; SELF-ASSEMBLING PROTEIN STRUCTURES (BO20235 X01), 12 MONTHS \$30,000

ROSSMANN, MICHAEL G; X-RAY DETERMINATION OF PROTEINS AND VIRUSES (B079596 X01); 12 MONTHS \$85,000 -

LIGHT, ALBERT; PROTEIN STRUCTURE AND FUNCTION (BOJISJO X00); 12 MONTHS \$30,000

WEINER, HENRY: LIVER ALDEHYDE DEHYDROGENASE AND APPLI-CATION OF SPIN-LABELING (BOSIESS XOO): 12 MONTHS \$15,000

CRAMER, WILLIAM A; B-TYPE CYTOCHROMES IN THE REGULATION OF PHOTOSYNTHETIC ELECTRON TRANSPORT (BOSSIES X00); 12 MONTHS \$25,000

#### INDIANA UNIVERSITY, INDIANAPOLIS-SCHOOL OF MEDICINE

BRYAN, WILLIAM P; HYDROGEN EXCHANGE OF PROTEINS (BOJOGSA X00); 12 MONTHS \$15,000

#### **IOWA**

### IOWA STATE UNIVERSITY OF SCIENCE & TECHNOLOGY

FROMM, HERBERT J; MECHANISM AND CONTROL OF ENZYME ACTION (8033400), 24 MONTHS \$31,400



#### ITALY

#### INSTITUTO REGINA ELENA

WYMAN, JEFFRIES: RELATIONS BETWEEN STRUCTURE AND FUNC-TION IN HEMOGLOBINS. MYOGLOBINS, AND RELATED SUBSTANCES (BOMSIS): 42 MONTHS \$80,000

#### KANSAS

UNIVERSITY OF KANSAS-UNIVERSITY OF KANSAS MEDICAL CENTER FISHER, HARVEY F; STRUCTURE AND MECHANISMS OF CATALYSIS OF ENZYMES (BOSSESS XOO); 12 MONTHS \$25,000

#### KENTUCKY

### UNIVERSITY OF LOUISVILLE-SCHOOL OF MEDICINE

YANKEELOV, JOHN A JR; ENEYME STRUCTURE AND FUNCTION (B017925 001); 4 MONTHS \$3,000

TAYLOR, JOHN F; HEMOGLOBIN STRUCTURE AND LIGAND EQUILIBRIA (BOSSOLI XG1): 12 MONTHS \$16,000

FONDA, MARGARET L; SUBSTRATE AND COENSYME INTERACTION WITH GLUTAMATE DECARBOXYLASE (BOSIDS); 24 MONTHS \$25,000 GRAY, ROBERT D; KINETICS OF THE QUATERNARY STRUCTURAL TRANSITION OF MEMOGLOSIN (BOSSES); 24 MONTHS \$25,000

#### LOUISIANA

## LOUISIANA STATE UNIVERSITY, BATON ROUGE

CHANG, SIMON H; ENEYMATIC RECOGNITION SITES AND TERTIARY STRUCTURE OF TRANSFER RNA (BOITIZE OOI): 12 MONTHS \$16,000

#### TULANE UNIVERSITY-DELTA RÉGIONAL PRIMATE RESEARCH CENTER

L1, YU-TEH, AND LI, BU-CHEN; GLYCOSIDASES INVOLVED IN THE DEGRADATION OF COMPLEX CARBOHYDRATES (BOISOIS 001); 24 WONTHS 320.000

#### MARYLAND

### PEDERATION OF AMER SOCIETIES FOR EXPER BIOLOGY

TOSTESON, DANIEL C; CONFERENCE ON MEMBRANES IN GROWTH, DIFFERENTIATION AND NEOPLASIA (BOJISTA); 12 MONTHS \$1,400

#### JOHNS HOPKINS UNIVERSITY

CEBRA, JOHN J; MOLECULAR AND CELLULAR BASES FOR ANTIBODY SPECIFICITY (B085471); 24 MONTHS \$100,000

SELIGER, HOWARD H; CONVERSION OF CHEMICAL ENERGY INTO LIGHT ENERGY BY BIOLOGICAL SYSTEMS (B029190 X02); \$15,000

SELIGER, HOWARD H; CONVERSION OF CHEMICAL ENERGY INTO LIGHT ENERGY BY BIOLOGICAL SYSTEMS (B022490 001); 12 MONTHS 828,000

### UNIVERSITY OF MARYLAND, BALTIMORE COUNTY

STEINER, ROBERT F; ASSOCIATING PROTEIN SYSTEMS (BOST705 KOI); 12 MONTHS \$25,000

## Johns hopkins university-school of hygiens a public health

TS'O, PAUL O P; STUDIES ON THE CONFORMATION, INTERACTION AND FUNCTION OF NUCLEIC ACIDS (BO30125 X00); 12 MONTHS \$40,000

#### JOHNS HOPKINS UNIVERSITY-SCHOOL OF MEDICINE

DINTZIS, HOWARD M; SEQUENCE DETERMINATION IN PROTEINS AND NUCLEIC ACIDS (BOOS101 001); 6 MONTHS \$10,000

BILTONEN, RODNEY L: THERMODYNAMIC STUDIES OF PROTEIN CONFORMATION (B017680 001): \$3,900

FENSELAU, ALLAN II: COMPARATIVE STRUCTURS-FUNCTION STU-DIES ON THE CONTROL OF GLYCERALDEHYDE-J-PHOSPHATE DEHYDROGENASE (B020412 001); 12 MONTHS \$16,000

DEHYDROGENASE (BOSEST) 601); 12 MONTHS \$16,000 GREENAWALT. JOHN W: STRUCTURE AND FUNCTION OF MITOCHONDRIAL MEMBRANES (BOJICS) X20); 12 MONTHS \$25,000

MITOCHONDRIAL MEMBRANES (BOJICH XOO); 12 MONTHS \$25,000 LENNARZ, WILLIAM J; THE ROLE OF LIPID INTERMEDIATES IN THE BIOSYNTHESIS OF MANNAN AND OTHER MACRO-MOLECULES (BG\_1121 XOO); 12 MONTHS \$17,000

#### MASSACHUSETTS

### BETH ISRAEL HOSPITAL

HIRSCH, CARL A; STUDIES OF MAMMALIAN PROTEIN SYNTHESIS AND ITS CONTROL (BOIOSIO); 24 MONTHS \$40,000

### BOSTON BIOMEDICAL RESEARCH INSTITUTE

GERGELY, JOHN; BIOCHEMISTRY OF MUSCLE CONTRACTION (BGJ1J34); 24 MONTHS \$40,000

F.LZINGA, MARSHALL; AMINO ACID SEQUENCE STUDIES ON MYOSIN (BUJ3070 X00), 12 MONTHS \$30,000

#### **BOSTON COLLEGE**

BADE, MARIA L; BIOCHEMISTRY OF ARTHROPOD CHITIN (BOITSIS COI); \$3,000

#### BOSTON UNIVERSITY

LAURSEN, RICHARD A; STRUCTURE AND MECHANISM OF ACTION OF ENZYMES (8047607 001); 12 MONTHS \$20,000

#### BRANDEIS UNIVERSITY

LEVINE, LAWRENCE; ANTIGEN-ANTIBODY REACTIONS AS PROBES OF PROTEIN MACROMOLECULAR STRUCTURE (B018338 001); 24 MONTHS 840,000

GROSSMAN, LAWRENCE; STUDIES IN THE ENSYMATIC EXCISION-REPAIR SYSTEM OF MICROCOCCUS LUTEUS (BOSSITS XOI), 12 MONTHS

FASMAN, GERALD S; CONFORMATIONAL STUDIES OF (1) SYNTHETIC POLYA-AMINO ACIDS AND POLYNUCLEOTIDES AND (1) DNA INTERACTIONS WITH HISTONES AND MODEL POLYPEPTIDES (BORRES) X01); 12 MONTHS \$30,000

JENCKS, WILLIAM P; ENERGY TRANSFERRING REACTIONS (BOJITA)
X00); 12 MONTHS \$28,000

KUSTIN, KENNETH; BIOINORGANIC CHEMISTRY OF VANADIUM IN TUNICATES (BOHAIT): 24 MONTHS \$48,000

#### CHILDRENS CANCER RESEARCH FOUNDATION

CASPAR, D L D, COHEN, CAROLYN, AND HARRISON, S C; MACROMOLECULAR ASSEMBLIES IN CELL BIOLOGY (B045447 001); 18 MONTHS \$22,000

LOWEY, SUSAN; PHYSICAL-CHEMICAL BASIS FOR THE CONTRAC-TILE MECHANISM (BOSSESS XXO); 12 MONTHS \$24,000

#### HARVARD UNIVERSITY

EDSALL, JOHN T; PHYSICAL CHEMISTRY OF AMINO ACIDS, PEP-TIDES AND PROTEINS (BOOSES 008); \$5,000

GILL, DAVID MICHAEL, DIPHTHERIA TOXIN AND PROTEIN SYNTHE-SIS (BOISELT 001); 24 MONTHS \$40,000

HOLTON, GERALD, AND HAWLEY, STEPHEN A; THERMODYNAMIC PROPERTIES OF AQUEOUS SOLUTIONS (BOINTON OOI): 24 MONTHS \$66,000 PAULUS, HENRY; MULTIVALENT FEEDBACK INHIBITION OF ASPAR-

TOKINASE IN BACILLUS POLYMYXA (BOSSES OCI); 12 MONTHS \$22,000 DOTY, PAUL; PROTEINS AND NUCLEIC ACID INTERACTIONS (BOSTALS

NOTE, PAUL; PROTEINS AND NUCLEIC ACID INTERACTIONS (BOSTALL XOL); 12 MONTHS \$50,000

LEVINE, ROBERT P; AN INVESTIGATION OF PHOTOSYNTHETIC ELECTRON TRANSPORT WITH MUTANT STRAINS OF CHLA-MYDOMONAS REINHARDI (BOSPECS XOI); 12 MONTHS \$26,000

STROMINGER, JACK L; STRUCTURE AND BIOSYNTHESIS OF BAC-TERIAL CELL WALLS (B029747 X01); 12 MONTHS \$50,000

WEBER, KLAUS K, GILBERT, WALTER, AND WATSON, JAMES D; STRUCTURE AND FUNCTION OF RNA-POLYMERASE (BOJO071); 24 MONTHS \$65,000

BLOCH. KONRAD, COMPARATIVE BIOCHEMISTRY OF FATTY ACID SYNTHETASES (BOJO689 XOO), 12 MONTHS \$25,000

BRIGGS, WINSLOW R; PHYSICAL, BIOCHEMICAL, AND PHYSIOLOGI-CAL STUDIES OF THE PLANT PIGMENT PHYTOCHROME (BOJOSE) X00); 12 MONTHS \$30,000

BRIGGS, WINSLOW R; PHYSICAL, BIOCHEMICAL, AND PHYSIOLOGI-CAL STUDIES OF THE PLANT PIGMENT PHYTOCHROME (BOSOGIA XOI), 12 MONTHS \$30,000

HASTINGS, J V; STRUCTURE AND FUNCTION OF BACTERIAL LU-CIFERASE (BOJIL:7 X00); 12 MONTHS \$55,000

KLOTZ, LYNN C; MOLECULAR WEIGHT OF EUCARYOTIC CHROMOSOMAL DNA (BOMMO); 24 MONTHS \$44,000

#### MASSACHUSETTS GENERAL HOSPITAL

KALCKAR, HERMAN M; RECOGNITION PATTERNS IN ENERMES AND IN FUNCTIONAL MEMBRANE PROTEINS (BOJO785 X00); 12 MONTHS \$36,000

KIRSHFIELD, IRVIN N; STUDIES ON THE REGULATION OF LYSYL-TRNA SYNTHETASE ACTIVITY (BGJ1011); 24 MONTHS \$26,800

ROBINSON, DWIGHT R; ENZYME MECHANISMS FOR ACYL TRANSFER REACTIONS (B631126 X00); 12 MONTHS \$25,000

### MASSACHUSET'S INSTITUTE OF TECHNOLOGY

BAGLIONI, CORRADO; PROTEIN AND RNA SYNTHESIS (801 1/14) 001); 12 MONTHS \$30,000

KHORANA, H GOBIND; NUCLEIC ACID SYNTHESIS (B021053 X02); 12 MONTHS \$140,000

LURIA, SALVADOR E; MOLECULAR ASPECTS OF THE INTERACTION OF BACTERIOPHAGES AND COLICINS WITH BACTERIA (BOSOS74 X00); 12 MONTHS \$50,000

RICH. ALEXANDER; MECHANISM OF PROTEIN SYNTHESIS AND MOLECULAR STRUCTURE OF THE NUCLEIC ACIDS (B00068) X00); 18 MONTHS \$40,000

HECHT, SIDNEY M; SITE-SPECIFIC TRNA MODIFICATIONS- RELA-TIONSHIP BETWEEN STRUCTURE AND FUNCTION AT THE TRNA LEVEL (BOJILIZ); 24 MONTHS \$50,000

MAGASANIK, BORIS; REGULATION OF THE METABOLIC PROCESSES OF THE SINGLE CELL AT THE MOLECULAR LEVEL (BOSESOS XOO); 12 MONTHS \$40,000

STEINER, LISA A; PRIMARY PROCESSES IN BACTERIAL PHOTOSYNTHESIS (BOSSEM): 24 MONTHS \$40,000

#### NEW ENGLAND MEDICAL CENTER HOSPITALS

WALLACH, DONALD F H; MOLECULAR ASPECTS OF MEMBRANE STRUCTURE AND FUNCTION (BOSSIES); 24 MONTHS \$50,000



#### UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL

TIPPER, DONALD J; POLYMER SYNT'IESIS DURING MICROCYST FOR-MATION IN 'MYXOCOCCUS XANTHUS' (BOIGSET): 4 MONTHS \$21,000

### UNIVERSITY OF MASSACHUSETTS, AMHERST

FORD, N C JR, AND KARASZ, F E: MEASUREMENT OF THE DIFFU-SION CONSTANT OF BIOLOGICAL MULECULES BY HOMODYNE SPEC-TROSCOPY (B010491 001); 24 MONTHS \$36,000

KIXSON, STEPHEN S; PHOTOCHEMICAL METHODS FOR LABELLING

ACTIVE SITES OF ENEYMES (BORTOLL COL); 12 MONTHS \$12,000

KARASZ, FRANK E; THERMODYNAMIC AND OTHER STUDIES OF THE CONFORMATIONAL TRANSITION IN BIOPOLYMERS (BOSSIBI); 24 MONTHS \$40,000

KARASZ, FRANK E: THERMODYNAMIC AND OTHER STUDIES OF THE CONFORMATIONAL TRANSITION IN BIOPOLYMERS (BOJJES 001); \$4,500

### BOSTON UNIVERSITY-SCHOOL OF MEDICINE

KAMINER, BENJAMIN; FILAMENTS, MORPHOGENESIS AND CON-TRACTION OF MUSCLE (BOSING); 24 MONTHS \$38,000

### HARVARD UNIVERSITY-HARVARD MEDICAL SCHOOL

KARNOVSKY, MANFRED L; OPERATION OF PREPARATION ROOM (B028121 001); 12 MONTHS \$15,000

BRATT, MICHAEL A; TEMPERATURE SENSITIVE MUTANTS AS A PROBE OF NOV INFECTION (BOJOSES X00); 12 MONTHS \$30,000

BRATT, MICHAEL A; TEMPERATURE SENSITIVE MUTANTS AS A PROBE OF NDY INFECTION (BOJOSPS X01); 12 MONTHS \$30,000

### EDSEL B FORD INSTITUTE FOR MEDICAL RESEARCH

SHORE, JOSEPH D; THE MECHANISM OF ACTION OF DEHYDROGENASES (Botsost oot); 24 MONTHS \$44,000

#### MICHIGAN STATE UNIVERSITY

TULINSKY, ALEXANDER; X-RAY STRUCTURE DETERMINATION OF ENZYMES AND OTHER BIOLOGICAL MOLECULES (BOISHOR CO!); 12 MONTHS \$17,500

WOOD, W A: AN OLIGOMERIZATION MODEL FOR ALLOSTERIC CON-

TROL (B010140 001); 24 MONTHS \$60,000

ROTTMAN, FRITZ M; INFLUENCE OF 2-O-METHYLATION ON THE PHYSICAL AND BIOLOGICAL PROPERTIES OF RNA (BOROTEL 001); 12 MONTHS \$24,000

CORNER, THOMAS R; BIOMECHANICS OF MICROBIAL MEMBRANES (B0J144J); 24 MONTHS \$30,000

WOOD, W A, AND TULINSKY, A; STRUCTURE OF A TRIMERIC METABOLIC ENZYME (BOJJ722 XOO); 12 MONTHS \$50,000

### UNIVERSITY OF MICHIGAN

ZAND, ROBERT; BIOPHYSICAL STUDIES OF CYCLIC AND BICYCLIC AMINO ACIDS, THEIR POLYMERS AND PEPTIDES (BOILLIS 001); 12 MONTHS \$11,300

#### MINNESOTA

#### UNIVERSITY OF MINNESOTA

LIENER, IRVIN E; INTERACTION OF PROTEASES WITH THEIR NATU-RAL INHIBITURS (B015J85 001); 24 MONTHS \$28,000

BODLEY, JAMES W; MECHANISM OF TRANSLOCATION (BOISIGS 001); 24 MONTHS \$36,000

LUMRY, RUFUS, AND ROSENBERG, ANDREAS; A SYSTEMS AP-PROACH TO PROTEIN FUNCTION (BO25785 002); 6 MONTHS \$14,500

RUBENSTEIN, IRWIN: A PHYSICAL-CHEMICAL STUDY OF LYSOGENY (Bosesee 001): 12 MONTHS \$20,000

### MISSOURI

### ST LCUIS UNIVERSITY

MATHEWS, F SCOTT: CRYSTALLOGRAPHIC STUDIES OF THE MICROSOMAL CYTOCHROME BS ELECTRON TRANSPORT ENZYME SYSTEM (BOSTESS XOI); 12 MONTHS \$25,000

MARTONOSI, ANTHONY; THE MECHANISM OF CALCIUM TRANSPORT BY SARCOPLASMIC RETICULUM (BOJJS67 X00); 12 MONTHS \$20,000

#### UNIVERSITY OF MISSOURI, COLUMBIA

KOEPPE, OWEN J; THE ENZYME DEHYDROGENASE D-GLYCERAL-DEHYDE-J-PHOSPHATE (BOLE 178 001) 18 MONTHS \$9,000

#### WASHINGTON UNIVERSITY

LIPKIN, DAVID: CHEMISTRY OF NUCLEIC ACIDS AND RELATED SUB-STANCES (BOSJSSS 001); \$2,700

BANASZAK, LEONARD J; X-RAY STRUCTURAL STUDIES OF CYTOPLASMIC MALATE DEHYDROGENASE (BOX747 XOI); 12 MONTHS \$20,000

SCHLESINGER, MILTON J: STRUCTURE AND FUNCTION OF E. COLI ALKALINE PHOSPHATASE (BORTELS 001); 12 MONTHS \$16,000

#### WASHINGTON UNIVERSITY-SCHOOL OF MEDICINE

THACH, ROBERT E; PROTEIN SYNTHESIS AND THE STRUCTURE OF THE RIBOSOME (BOSSESSA XOI); 12 MONTHS \$30,000

BCHLESSINGER, DAVID; REGULATION OF RNA AND RIBOSOME FOR-MATION AND BREAKDOWN IN BACTERIAL CELLS (BORSOSS 001); \$4 MONTHS \$60,000

FRIEDEN, CARL, ENSYME STRUCTURE AND FUNCTION (BORGAS) X01); 12 MONTHS \$24,000

#### MONTANA

#### MONTANA STATE UNIVERSITY

SHEPARD, JAMES F; ANTIGENIC CHARACTERIZATION AND IN-TRACELLULAR LOCALIZATION OF VIRAL STRUCTURAL PROTEIN (Bo26415 001); 12 MONTHS \$8,000

#### NEBBASKA

#### CREIGHTON UNIVERSITY-SCHOOL OF MEDICINE

WATT, DEAN D; CHEMICAL AND BIOLOGICAL PROPERTIES OF THE NEUROTOXINS IN VENOM (BOJJ 166); 24 MONTHS \$38,000

#### DARTMOUTH COLLEGE-DARTMOUTH MEDICAL SCHOOL

MALKIN, LEONARD 1; PROTEIN SYNTHESIS IN REGENERATING RAT LIVER AND TUPOR MITOCHONDRIA (BORFIIF); 24 MONTHE \$35,000

LIENHARD, CUSTAV E; MECHANISMS IN ENEYHATIC CATALYSIS-TRANSITION-STATE ANALOGS, DISTORTION, THIAMINE CATALYSIS, THIAMINASE I, PROPIONYL COA CARBOXYLASE (BOJJJ4); 12 MONTHS \$34,000

#### NEW JERSEY

#### PRINCETON UNIVERSITY

FRESCO, JACQUES R; PHYSICAL BIOCHI A. RY OF POLYNUCLEO-TIDES AND RIBONUCLEIC ACIDS (BO18865 07-), MONTHS \$27,000

SUEOKA, NUBURU; MOLECULAR ASPECTS OF GENETICS (B010560 001): 24 MONTHS \$68,000

LANGRIDGE, ROBERT; STRUCTURES OF THE NUCLEIC ACIDS (B023021 001); 12 MONTHS \$35,000

JOHNSON, FRANK H, AND SHIMOMURA, OSAMU; BIOCHEMISTRY OF LUMINESCENCE (BOJOSAJ X00); 12 MONTHS \$45,000

GILVARG. CHARLES; ESTABLISHMENT OF MICROSCOPE LABORATORY (BOJ1793); 24 MONTHS \$50,000

FRESCO, J. R. AND LANGRIDGE, R. CONFERENCE ON TRANSFER RNA STRUCTURE (BOJ2020); 12 MONTHS \$10,000

#### RUTGERS UNIVERSITY

PRICE, C A: RESOLUTION AND CAPACITY IN EQUIVOLUMETRIC GRADIENTS (BO30018 X01); 12 MONTES \$12,000

### RUTGERS UNIVERSITY-MEDICAL SCHOOL

CRANE, ROBERT K: ABSORPTION OF SUGARS (BOILIEL 001): 24 MONTHS \$64,000

#### **NEW MEXICO**

### NEW MEXICO STATE UNIVERSITY

BIRNBAUM, EDWARD R; INTERACTIONS OF RARE EARTH METAL IONS WITH PEOTSINS (BOJ1374); 24 MONTHS \$40,000

#### UNIVERSITY OF NEW MEXICO.

ALPERT, SEYMOUR S; KINETICS AND MECHANISMS OF MACROMOLECULAR-INTERACTIONS USING QUASI-ELASTIC LASER LIGHT SCATTERING (BOJI110 X00); 12 MONTHS \$20,600

#### **NEW YORK**

#### **BROOKHAVEN LABORATORY**

SCHOENBORN, BENNO P; NEUTRON DIFFRACTION ANALYSIS OF PROTEIN STRUCTURES (AG00J28): 12 MONTHS \$46,000

#### COLD SPRING HARBOR LAB OF QUANTITATIVE BIOLOGY

GESTELAND, RAYMOND F; USE OF COUPLED CELL-FREE PROTEIN SYNTHESIS FROM LAMBDA, SY 10 AND POLYOMA DNAS TO STUDY CON-TROL OF VIRAL DEVELOPMENT (BOJOTIO X00); 12 MONTHS \$40,000

UDRY, WILLIAM R; XXXVII COLD SPRING HARBOR SYMPOSIUM ON QUANTITATIVE BIOLOGY (BOSSOSS); 12 MONTHS \$5,000

#### COLUMBIA UNIVERSITY

LEVINTHAL, CYRUS; PROTEIN CRYSTALLOGRAPHY USING 'PARTIAL STRUCTURES' FOR PHASES DETERMINATION (BOISM) 601); 6 MONTHS \$10,000

BEYCHOK, SHERMAN; OPTICAL ACTIVITY OF EIOLOGICAL MACROMOLECULES IN RELATION TO CONFORMATION (BORDINI XOI); 12 MONTHS \$41,000

CANTOR, CHARLES R; FLUORESCENCE STUDIES OF RIBOSOME STRUCTURE (BOS 1522 X00); 12 MONTHS \$30,000

#### CORNELL UNIVERSITY

EDELSTEIN, STUART; QUATERNARY STRUCTURE OF HEMOGLOBIN (B00877# 001); \$7,000

EDELSTEIN, STUART; QUATERNARY INTERACTIONS IN PROTEINS (B008773 008); 24 MONTHS \$44,000



USHER, DAVID A: ENSYME MODELS AND THE MECHANISM OF RIBONUCLEASE ACTION (BOISES OOI); 18 MONTHS \$25,000

HEPPEL, LEON A; BINDING PROTEINS AND THEIR ROLE IN ACTIVE TRANSPORT (BORTISS XOI); 12 MONTHS \$37,000

SCHERAGA, HAROLD A; THERMODYNAMIC AND STATISTICAL MECHANICAL STUDIES OF PROTEIN REACTIONS (BOSSISS XOI): 12 MONTHS \$60,000

LOUDON, Q MARC: THE CHEMICAL INTERACTIONS IN LACTOSE

SYNTHETASE (BOSSES 001): 12 MONTHS \$20,000

SIEGEL, BENJAMIN M; SAPERIMENTAL HIGH RESOLUTION ELEC-TRON MICROSCOPY AND ELECTRON OPTICS FOR BIOMOLECULAR IN-VESTIGATIONS (BOJOSES X00); 18 MONTHS \$45,000

RACKER, EFRAIM; RESOLUTION AND RECONSTITUTION OF THE SYSTEM OF PHOTOPHOSPHORYLATION (BOJOSSO XOO); 18 MONTHS \$30,000 WU, RAY; DEOXYNUCLEOTIDE SEQUENCE DETERMINATION OF DNA (BOJ) 445 X00); 12 MONTHS \$35,000

WU. RAY: DEOXYNUCLEOTIDE SEQUENCE DETERMINATION OF DNA (B031435 X01); 12 MONTHS \$25,000

MOFFAT, JOHN K; STRUCTURAL APPROACH TO HEMOGLOBIN KINETICS AND FUNCTION (BOJESSI X00): 12 MONTHS \$25,000

HESS. GEORGE P. STRUCTURE AND FUNCTION OF ENZYMES (BOSENS X00): 12 MONTHS \$25,000

MALEY, FRANK: REGULATORY REACTIONS INVOLVED IN THYMIDY-LATE BIOSYNTHESIS (BO27398 001); 12 MONTHS \$10,000

### HUNTER COLLEGE

BERTSCH WALTER-DELAYED STUDIES ON LICHT PHOTOSYNTHETIC ENERGY CONVERSION (BO20084 001); 24 MONTHS \$50,000

#### NEW YORK UNIVERSITY

RANDO, ROBERT R: BIOCHEMISTRY OF THE ACTIVE SITE (BOSSA) 001): 12 MONTHS \$10,000

STERN, JOSEPH R: ROLE OF SODIUM AND OXALACETATE DECAR-BOXYLASE IN BACTERIAL CITRATE TRANSPORT (BOXOSOI): 16 MONTHS \$15,600

#### PUBLIC REALTH RESEARCH INSTITUTE OF NEW YORK

ADLER, FRANK L, AND FISHMAN, MARVIN; TRANSFER OF AN-TIBODY AND ALLOTYPIC SPECIFICITIES BY RIBONUCLEIC ACID (B029014 X01), 12 MONTHS \$60,000

#### BENSSELARR POLYTECHNIC INSTITUTE

BIRNBOIM, MEYER H; VISCOELASTICITY IN BIOPHYSICS (B008770 001); \$4,000

REGULATORY WEDLER. FREDERICK C: CATALYTIC AND MECHANISMS IN KEY ENZYMES OF ASPARTATE AND GLUTAMATE METABOLISM (B031751): 24 MONTHS \$38,500

#### **EJCKEFEI LER UNIVERSITY**

NEMETHY, GEORGE; NONCOVALENT INTERACTIONS IN GLYCOL SOLUTIONS OF MICELLES AND OF PROTEINS (BOZZEZO 001); \$1,400

LUCK, DAVID J L. ORIGIN AND DEVELOPMENT OF MITOCHONDRIA IN NEUROSPORA CRASSA (BO27509 X01); 12 MONTHS \$23,000

CRAIG, LYMAN C: A CONSORTIUM ON 'HIGH FREQUENCY NUCLEAR MAGNETIC RESONANCE RESEARCH' (BO29916 XOI); 12 MONTHS \$19,000

MAUZERALL, D; THE PHOTOCHEMICAL FORMATION OF OXYGEN (BOJJJ\$\$); 24 MONTHS \$80,000 EDELMAN, GERALD M. AND GALL, W EINAR; PURCHASE OF AN AU-

TOMATED FRACTIONATION AND PROTEIN SEQUENCE DETERMINA-TION (R033403): 12 MONTHS \$45,000

#### STATE UNIVERSITY AT ALBANY

EDWARDS. DAVID L: ASSEMBLY PROCESSES IN MEMBRANE SYSTEMS (BOR6313 001); 12 MONTHS \$10,000

ARONSON. JOHN N. AND ROSENTHAL, ARTHUR; BACILLUS THURIN-PARASPORAL PROTEIN AND ALANINE-GLUTAMATE DEHYDROGENASE (BOJOGOJ): 24 MONTHS \$25,000

MYER, YASH P; CONFORMATION OF CYTOCHROMES (BOJOSST X00); 12 MONTHS \$25,000

MYER, YASH P; CONFORMATION OF CYTOCHROMES (BRIGGET XOI); 12 MONTHS \$39,000

FREDERICK G JR: RAPID KINETIC STUDIES ON WALZ. RIBONUCLEASE TI (BOJJ468); 24 MONTHS \$42,000

### STATE UNIVERSITY AT BUFFALO

MCMENAMY, RAPIER H; THE PRIMARY SEQUENCE DETERMINA-TION OF HUMAN SERUM ALBUMIN (BOISTOT COI); 18 MONTHS \$40,000 STRAUSS, NORMAN: TRANSCRIPTION OF THE SPORULATION GENOME OF BACILLUS SUBTILIS (BOIJID) 001); 24 MONTHS \$25,000

### STATE UNIVERSITY AT STONY BROOK

LEFEVRE, PAUL G. AND MASIAK, STANLEY J: PHYSICOCHEMICAL BASIS OF CELL MEMBRANE SUGAR TRANSPORT (BOIRESS OGI); 12 MONTHS \$32,000

WISHNIA, ARNOLD: DYNAMIC ASPECTS OF PROTEIN STRUCTURE (BOS1749 X00): 15 MONTHS \$38,000

#### SYRACUSE UNIVERSITY

FONDY, THOMAS P: STRUCTURE, BIOSYNTHESIS, AND EVOLUTION F FLAVIN-AND NAD-LINKED GLYCEROL-S-PHOSPHATE GLYCEROL-J-PHOSPHATE DEHYDROGENASES (801094) 001); 12 MONTHS \$11,000

COLUMBIA UNIVERSITY-COLLEGE OF PHYSICIANS AND BURGEONS SPIEGELMAN, S. THE MECHANISM OF ENZYME SYNTHESIS (BOITAS)

X 08); 12 HONTHS \$80,000

SRINIVASAN, P. R.: REGULATION OF MACROMOLECULAR SYNTHESIS IN TUMORS AND VIRUS INFECTED CELLS (BORISON COI): 12 MONTHS

NACHMANSOHN, DAVID, AND ROSENBERRY, TERRONE L; PROTEINS IN EXCITABLE MEMBRANES, THEIR PROPERTIES AND FUNCTION IN BIOELECTRICITY (BOSTIN X00): 12 MONTHS \$58,000

ERLANGER, BERNARD F: INTERACTIONS WITH THE ACTIVE SITES OF BIOLOGICAL EFFECTORS (BOJIJON X00): 12 MONTHS \$18,000

ERLANGER, BERNARD F; INTERACTIONS WITH THE ACTIVE SITES OF BIOLOGICAL EFFECTORS (BOJ1396 XOI); 12 MONTHS \$17,000

CORNELL UNIVERSITY-AGRICULTURAL EXPERIMENT STATION

SLOBIN, L 1: THE TOPOGRAPHY OF RIBOSOMES (BOJIIBI); 24 MONTHS

#### NEW YORK UNIVERSITY-SCHOOL OF MEDICINE

SALTON, MILTON R J. BIOCHEMISTRY OF BACTERIAL MEMBRANES (B031964 X00); 12 MONTHS \$45,000

ANALYSIS OF INFORMATIONAL KLEINSCHMIDT, ALBRECHT K; MACROMOLECULES (BOJES18); 24 MONTHS \$60,000

#### YESHIVA UNIVERSITY-ALBERT EINSTEIN COLLEGE OF MEDICINE

HOBERMAN, HENRY D; STUDIES OF ENEYMATICALLY CATALYSED HYDROGEN TRANSFER REACTIONS (BO12626 001); 24 MONTHS \$16,000

ENGLARD, SASHA: MALATE DEHYDROGENASES. STRUCTURE AND BIOLOGICAL CONTROL (B012870 001); 24 MONTHS \$50,000

SUMMERS, DONALD F; TRANSLATION OF POLYCISTRONIC MES-SENGER RNA OF RNA CONTAINING ANIMAL VIRUSES (BOIRORS GOI); 24 MONTHS \$50,000

EHRENFELD. ELVERA: BIOLOGICAL FUNCTIONS OF PICORNAVIRUSES AND THEIR RELATIONSHIP TO HOST CELL FUNCTION (BOISOSS 001); 24 MONTHS \$50,000

FINKELSTEIN, ALAN: MECHANISMS OF ELECTRICAL EXCITABILITY IN THIN LIPID MEMBRANES (BOJITAT XOO): 12 MONTHS \$40,000

HURWITZ, JERARD; ENZYMATIC REACTIONS INVOLVED IN NUCLEIC ACID METABOLISM (BOSISS XOO): 12 MONTHS \$35,000

SHEARD, BRIAN; NMR STUDY OF E.COLI ALKALINE PHOSPHATASE (B032070); 24 MONTHS \$40,000

WARNER, JONATHAN R; NUCLEO-CYTOPLASMIC INTERACTION IN THE SIMPLE EUKARYOTE, 'S. CEREVISIAE' (BOJERTA XOO), 12 MONTHS

SCHILDKRAUT, CARL L; DNA OF SPECIALIZED ANIMAL CELLS (Bossess X00); 12 MONTHS \$45,000

### HEALTH RESEARCH INC-ROSWELL PARK DIVISION

KARTHA, GOPINATH; CRYSTALLOGRAPHIC STUDIES OF THE STRUC-TURE AND FUNCTION OF THE ENZYME RIBONUCLEASE (BOSSOBI 002); 12 MONTHS \$19,000

PAIGEN, KENNETH; PROPERTIES OF SINGLE LYSOSOMES AND MEM-BRANE FRACMENTS (BOJOJ (\$ X00); 12 MONTHS \$20,000

#### NORTH CAROUNA

### DUKE UNIVERSITY

HILL, ROBERT L: STRUCTURE-FUNCTION RELATIONSHIPS OF EN-ZYMES (B029334 X01); 12 MONTHS \$35,000

TAR ORD, CHARLES, STRUCTURE AND FUNCTION OF CELL MEM-BRANES (BOJOSJS X00); 12 MONTHS \$40,000

### NORTH CAROLINA STATE UNIVERSITY AT RALEIGH

HORTON, H LOBERT; CONFORMATIONAL FLEXIBILITY PROTEOLYTIC ENZYMES IN SOLUTION (BOJJA72); 24 MONTHS \$40,000

UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

EDGELL, MARSHALL H; STRUCTURE OF THE BACTERIOPHAGE PHI X 174 (B013397 001); 6 MONTHS \$10,000

HERMANS, JAN: THEORETICAL ASPECTS OF PROFEIN STRUCTURE (B016480 001): 24 MONTHS \$44,000

#### DUKE UNIVERSITY-SCHOOL OF MEDICINE

WEBSTER, ROBERT E; RIBOSOME MESSAGE COMPLEX DURING PROTEIN SYNTHESIS (BOSSIST XOI); 12 MONTHS \$20,000

VANAMAN, THOMAS C; ACYL CARRIER-AND ACYL CARRIER-LIKE PROTEINS (B027597 001); 12 MONTHS \$12,000

### **BLUFFTON COLLEGE**

SCHIRCH, LA VERNE; MECHANISM AND PROPERTIES OF SERINE TRANSHYDROXYMETHYLASE (BOJITSO XOO): 12 MONTHS \$18,000

#### CASE WESTERN RESERVE UNIVERSITY

COOPER, CECIL; NUCLEOTIDE ANALOGUE STUDIES (Boterit 001); 24 MONTHS \$25,000



BLACKWELL, JOHN, AND KOENIG, JACK L; A STUDY OF THE STRUCTURE OF STARCH AND IT'S CONSTITUENT POLYSACCHARIDES (BOSSIOS); 24 MONTHS \$40,000

WALTON, ALAN G; STUDY OF COILED COIL FORMATION IN FIBROUS PROTEIN MODEL POLYPEPTIDES (BOSTOTE): 24 MONTHS \$40,000

### OHIO STATE UNIVERSITY

SCOTT, ROY A: CONFORMATIONAL STUDIES OF BIOPOLYMERS (BOJOS70 X00): 12 MONTHS \$20,800

KLAPPER, MICHAEL H; LIGAND BINDING AND PROTEIN DISAG-GREGATION PROPERTIES OF METHEMOGLOBIN (BG32777); 24 MONTHS 84,000

AUNE, MIRK C: INTERPRETATIONS OF MACROMOLECULAR INTERACTIONS (BOSSES); 24 MONTHS \$40,000

### UNIVERSITY OF CINCINNATI-COLLEGE OF MEDICINE

LINGREL, JERRY B; THE ISOLATION AND CHARACTERIZATION OF THE HEMOGLOBIN MESSENGER RNA (B099894 001); 12 MONTHS \$15,000

#### OKLAHOMA

### OKLAHOMA STATE UNIVERSITY

SPIVEY, H OLIN; PROPERTIES AND MECHANISMS OF ENZYMES (BOGGES) 008); 24 MONTHS \$34,000

#### OREGON

#### OREGON STATE UNIVERSITY

JOHNSON, WALTER C; OPTICAL PROPERTIES OF CARBOHYDRATES II (Bossess XoI); 12 MONTHS \$30,000

ISENBERG, IRVIN; NUMERICAL ANALYSIS OF FLUORESCENCE DECAY AND SEDIMENTATION EQUILIBRIUM DATA (BOSSES); 24 MONTHS \$33,000

### UNIVERSITY OF OREGON - EUGENE

REITHEL, FRANCIS J; REFLECTION OF PROTEIN STRUCTURAL CHANGE IN THE VALUE OF THE PARTIAL SPECIFIC VOLUME (BOOSIOS 201); \$4,000

REITHEL, F J. SELF-ASSOCIATION OF PROTEIN AND ITS MODIFICA-TION BY HEAVY METAL BINDING (BOOSIOS 002); 24 MONTHS \$35,000

SCHELLMAN, JOHN A: SPECTROSCOPY OF ORIENTED BIOLOGICAL.
SYSTEMS (BORTAGO NOW, 12 MONTHS \$38,000

HERBERT, EDWARD; ENZYMATIC ADDITION OF THE PCPCDA GROUP TO TRANSFER RNA (B099096 X01); 12 MONTHS \$30,000

FETICOLAS, WARNER L: INELASTIC TWO AND THREE PHOTON SCATTERING FROM BIOLOGICAL POLYMERS (B019709 X01); 12 MONTHS \$33,000

MATTHEWS, BRIAN W; STRUCTURE OF THERMOLYSIN, A HEAT STA-BLF PROTEASE (BOJOSEJ XOO); 12 MONTHS \$45,000

BERNHARD, SIDNEY A: MOLECULAR STRUCTURE AND MOLECULAR FUNCTION OF CATALYTIC SITES IN ENZYMES (BOJ1975 X00); 12 MONTHS \$45,000

GRIFFITH, O HAYES; TOPOLOGICAL LABELING OF BIOLOGICAL SUR-FACES (BOJ2808); 24 MONTHS \$40,000

TERWILLIGER, ROBERT C; STRUCTURE AND FUNCTION OF AN-NELID RESPIRATORY PIGMENTS (BOS 1294); 24 MONTHS \$25,000

#### **PENNSYLVANIA**

### DUQUESNE UNIVERSITY

LI, NORMAN C; METAL BINDING AND ELECTRONIC ASPECTS IN MOLECULAR BIOLOGY (B015117 001); \$5,500

### EASTERN PENNSYLVANIA PSYCHIATRIC INSTITUTE

MUELLER, PAUL, AND RUDIN, DONALD O; MOLECULAR BASIS OF ACTION POTENTIALS IN EXPERIMENTAL BINOLECULAR LIPID MEM-BRANES (BOOJI41 001); 24 MONTHS \$32,000

#### INSTITUTE FOR CANCER RESEARCH

MILDVAN, ALBERT S; MECHANISMS OF METAL ACTIVATED AND METALLOGNEYMES (BORTES) XOI); 12 MONTHS \$24,000

ANDERSON, THOMAS F; SPECIFIC SYNTHESES IN CELLULAR AND VIRAL SYSTEMS (8019191 X01); 12 MONTHS \$60,000

BAYER, MANFRED E; MULTIFUNCTIONAL SURFACE ZONES OF BACTERIA AI'D THEIR STRUCTURAL ORGANIZATION (BOJO244); 24 MONTHS \$60,000

SIMON, LEE D; THE SPECIFIC ASSEMBLY OF COMPLEX BIOLOGICAL STRUCTURES (BOJOLIS): 24 MONTHS \$50,000

KAJI, HIDEKO; FUNCTION AND SYNTHESIS OF RIBOSOMAL PROTEINS (BOJOSSI): 24 MONTHS \$40,000

#### PENNSYLVANIA STATE UNIVERSITY

BENKOVIC, STEPHEN J; FOLIC ACID MECHANISMS (BOJII01 X00): 12 MONTHS \$24,000

VILLAFRANCA, JOSEPH J; MAGNETIC RESONANCE STUDIES OF ACONITASE AND TPN-ISOCITRATE DEHYDROGENASE (BOSHIPI): 24 MONTHS \$40,000

#### TEMPLE UNIVERSITY

SCHRAMM, VERN LEE; MECHANISM AND REGULATION OF AMP-NUCLEOSIDASE ACTIVITY (BOJ4860); 24 MONTHS \$40,000

#### UNIVERSITY OF PENNSYLVANIA

XAJI, AKIRA; MECHANISM OF PROTEIN SYNTHESIS (BOISSS 001); 24 MONTHS \$50,000

BONNER, WALTER D JR; THE MOLECULAR BASIS OF ENERGY TRANSFER IN HIGHER AND LOWER PLANTS (BOSTILL XOI), 12 MONTHS \$30,000

WILSON, DAVID F, AND DUTTON, PETER L; A THERMODYNAMIC EVALUATION OF ENERGY CONSERVATION IN MITOCHONDRIA (B028125 001); 12 MONTHS \$55,000

KALLENBACH, NEVILLE R; CONFORMATION AND INTERACTION IN PARTIALLY ORDERED NUCLEIC ACIDS (BOISSIS 001); \$3,000

BRYAN, JOSEPH; BIOCHEMISTRY AND GENETICS OF MICROTUBULE SUBUNITS (BOSEST XOO); 12 MONTHS \$25,000

#### UNIVERSITY OF PITTSBURGH

TSUJI, FREDERICK I; BIOLOGICAL AND CHEMICAL RESEARCH ON LUMINESCENCE (BOSGISS); 12 MONTHS \$10,000

#### TEMPLE UNIVERSITY-SCHOOL OF MEDICINE

SHOCKMAN, GERALD D; BACTERIAL AUTOLYTIC ENZYMES AND THE FUNCTION AND STRUCTURE OF THE BACTERIAL CELL WALL (BOSCOS) 24 MONTHS \$50,000

SCRUTTON, MICHAEL C; INVESTIGATIONS OF METALLOENEYMES (BOSONIS): 24 MONTHS \$40,000

HOOBER, JOHN K; BIOGENESIS OF CELLULAR MEMBRANES (BOSHIS); 24 MONTHS \$44,000

### University of Pennsylvania-School of Medicine

KAYNE, FREDERICK I; CHEMICAL RELAXATION STUDY OF PYRU-VATE KINASE (8025912 001); 12 MONTHS \$18,000

DEVAULT, DON C; THE STUDY OF BIOLOGICAL REACTIONS OF LESS THAN MICROSECOND HALFTIMES (BOSTSOO DOL): 12 MONTHS \$21,000

WILSON, DAVID F, AND DUTTON, PETER L; A THERMODYNAMIC EVALUATION OF ENERGY CONSERVATION IN MITOCHONDRIA (BOSSISS 001); 12 MONTHS \$25,000

MCCRAY, JAMES A; OXYGEN PHOTOLYSIS AND RECOMBINATION STUDIES OF HEMOPROTEINS (BOJILES); 24 MONTHS \$36,000

COHN, MILDRED: MECHANISMS OF PHOSPHATE TRANSFER REAC-TIONS (BOJE168 X00); 12 MONTRS \$26,000

Blasie, J Kent; X-ray diffraction of biological membranes (Bosepon: 24 Months \$40,000

### UNIVERSITY OF PITTSBURGH-SCHOOL OF MEDICINE

GILL, THOMAS J III: THE PHYSICAL CHEMISTRY AND IMMU-NOCHEMISTRY OF SYNTHETIC POLYPEPTIDES (BOJOSES X00); 12 MONTHS \$24,000

HOFMANN, KLAUS; TOTAL SYNTHESIS OF RIBONUCLEASE TI 'VIA' FRAGMENT CONDENSATION (BOJOSJ4 X00); 12 MONTHS \$25,000

#### RHODE ISLAND

### BROWN UNIVERSITY

CHA, SUNGMAN; MECHANISM OF SUCCINATE THIOKINASE REACTION (BOSG \$55); 24 MONTHS \$40,000

### **GORDON RESEARCH CONFERENCES**

CRUICKSHANK, ALEXANDER M; GORDON RESEARCH CONFERENCE ON THE PHYSICS AND CHEMISTRY OF WATER AND AQUEOUS SOLU-TIONS (B041401); 12 MONTHS \$2,500

### TENHESSES

### UNIVERSITY OF TENNESSEE, KNOXVILLE

CHURCHICH, JORGE E; FLUORESCENCE PE )PERTIES OF PYRIDOX-AL-S-PHOSPHATE ENZYMES (BOJJI95); 24 MONTHS \$44,000

### VANDERBILT UNIVERSITY

VENABLE, JOHN H JR: X-RAY STUDIES OF COMPLEX BIOLOGICAL STRUCTURES (BOOSSOT 001); 4 MONTHS \$3,000

PRATT, LEE H; COMPARATIVE STUDY OF PHYTOCHROME (B017057 001); \$2,800

LERMAN, LEONARD S; DNA STRUCTURE IN CONCENTRATED POLYMER SOLUTIONS (BOS0734 X00); 12 MONTHS \$65,000

### VANDERBILT UNIVERSITY-SCHOOL OF MEDICINE

INAGAMI, TADASHI; ROLE OF SPECIFICITY SITE IN ENZYME CATALYSIS (B037383 001); 12 MONTHS \$20,000

CUNNINGHAM, LEON W; CHEMICAL & ENZYMATIC STUDIES OF GLYCOPROTEINS (8036478 X00); 12 MONTHS \$25,000

PARK, JANE H; RELATIONSHIP OF PROTEIN STRUCTURE TO CATA-LYTIC MECHANISM (BOJO778 XOO), 12 MONTHS \$25,000

#### TEXAS

### TEXAS A & M UNIVERSITY

HOEVE, CORNELIS A J; THE STRUCTURE OF WATER IN CONTACT WITH SURFACES (Botto) 001); 12 MONTHS \$18,000

ADAMS, EMORY TEMPLE IB; SELF-ASSOCIATIONS AND MOLECULAR-WEIGHT DISTRIBUTIONS OF MOLECULES OF BIOLOGICAL IMPORTANCE (BOJIEW); £4 MONTHS \$50,000



GLOVER, GEORGE I; AFFINITY LABELING OF AMINO ACID TRANS. PORT PROTEINS (BOUME): 24 MONTHS \$35,000

### UNIV OF TEX MD ANDREN HOSP & TUM INST AT HUSTN

SCHLAMOWITZ, MAX; IMMUNOCHEMICAL AND IMMUNOLOGICAL STUDIES OF GLYCOPROTEINS (B013630 004); 24 MONTHS \$40,000

WALTER, CHARLES F; KINETICS OF OPEN BIOLOGICAL SYSTEMS-CONT: <! AND OSCILLATIONS (BOSOSIS 601); T MONTHS \$1,900

1N:4, ±S. LAMAR DANIEL; CONFORMATION OF SINGLE-STRANDED DNA IN SOLUTION (BOJIO45); 24 MONTHS \$35,000

#### UNIV OF TEXAS AT AUSTIN

FOX, J LAWRENCE; MECHANISM OF FLAVOENZYME REACTION (B087464 001); 12 MONTHS \$16,000

RIGGS, AUSTEN F II; BIOCHEMISTRY OF HEMOGLOBINS AND CERTAIN OTHER PROTEINS (BOSTESS XOI); 12 MONTHS \$20,000

HARDESTY, BOYD; THE MECHANISM BY WHICH TI AND THE CAUSE TRANSLOCATION OF MRNA THROUGH RIBOSOMES (BOSOMOS); 24 MONTHS \$45,000

BOSE, HENRY R; EARLY STAGES IN THE REPLICATION OF EN-VELOPED RNA ANIMAL VIRUSES (BGS1 [50]; 24 MONTHS \$30,000

#### UNIV OF TEXAS AT DALLAS

LANG, DIMITRU; QUANTITATIVE MORPHOLOGY AND PHYSICAL CHEMISTRY OF NUCLEIC ACIDS (BOJIISA X00); 12 MONTHS \$27,000

#### UNIV OF TEXAS HOUSTON MEDICAL SCHOOL

DEMOSS, JOHN A; STUDIES ON THE STRUCTURE, FUNCTION, AND ASSEMBLY OF PROTEIN AGGREGATES IN THE TRYPTOPHAN PATHWAY (BOSISTS); 12 MONTHS \$32,000

DEMOSS, JOHN A; STUDIES ON THE STRUCTURE, FUNCTION, AND ASSEMBLY OF PROTEIN AGGREGATES IN THE TRYPTOPHAN PATHWAY (BGJ578 001); \$5,000

#### UNIV OF TEXAS SOUTHWESTERN MED SCH AT DALLAS

HACKENBROCK, CHARLES R; ELECTRON TRANSPORT-DEPENDENT CONFORMATIONAL TRANSITIONS IN MITOCHONDRIA (BOJOSJÆ); 11 MONTHS \$19.000

#### UTAH

#### BRIGHAM YOUNG UNIVERSITY

VERNON, LEG P; NATURE OF CHLOROPLAST MEMBRANES AND REACTION CENTERS (8028008 X01); 12 MONTHS \$36,000

#### UNIVERSITY OF UTAH

OLIVERA, BALDOMERO M; ENZYMATIC JOINING OF DNA (BO2286)
X01): 12 MONTHS 430000

FUTRELL, JEAN H. AND GRAY, WILLIAM R; PROTEIN SEQUENCING BY CHEMICAL IONIZATION MASS SPECTROMETRY (BOSSISS\*); 24 MONTHS 437,000

#### UNIVERSITY OF UTAH-COLLEGE OF MEDICINE

KUBY, STEPHEN A; GLUCOSE 6-PHOSPHATE DEHYDROGENASE (BOSSESSE XOS): 12 MONTHS \$20,000

#### VERMONT

#### UNIVERSITY OF VERMONT-COLLEGE OF MEDICINE

WILLARD, JAMES M; METALLOENZYMES OF THE PROPIONIC ACID BACTERIA GROWN ON METAL-DEFINED MEDIA (BC27236 001); 12 MONTHS \$10,000

#### VIRGINIA

### UNIVERSITY OF VIRGINIA

DUCKWORTH, DONNA H; EFFECTS OF BACTERIOPHAGE ON MEMBRANE-ASSOCIATED FUNCTIONS OF E. COLI (BOILES 001); 24 MONTHS \$45,000

KUPKE, DONALD W, AND BEAMS, JESSE W; CHANGE IN PARTIAL VOLUME OF PROTEINS (8027331 001); 12 MONTKS \$25,000

KRETSINGER, ROBERT; CRYSTALLOGRAPHY OF ALBUMIN, MYOGLOBIN, LYSOXYME, RHODOPSIN AND OLIGO-NUCLEOTIDES (8815106 001); 13 MONTHS \$15.000

MARTIN, R BRUCE; METAL ION INTERACTIONS WITH COMPOUNDS OF BIOLOGICAL INTEREST (BORNIES XOI); 12 MONTHS \$35,000

#### WASHINGTON

### BOBING SCIENTIFIC RESEARCH LABORATORIES

CHANG, DAVID B; RESTRICTED DIFFUSION IN BIOPHYSICAL SYSTEMS (C119000): 24 MONTHS \$42,750

#### UNIVERSITY OF WASHINGTON

PARSON, WILLIAM W; LASER FLASH STUDIES OF PHOTOSYNTHESIS (8630732 X00); 12 MONTHS \$25,000

HERRIOTT, JON R; X-RAY STUDIES OF HYDROLYTIC ENZYMES (BOSSESS X00); 12 MONTHS \$23,000

FISCHER, EDMOND H; PYRIDOXAL PHOSPHATE IN THE STRUCTURE AND FUNCTION OF PROTEINS (BOJJS 1) X00); 12 NONTHS \$39,000

#### WASHINGTON STATE UNIVERSITY

MCFADDEN, BRUCE A: FUNCTION AND REGULATION OF MICROBIAL ISOCITRATE LYASE (BOSILOO XOO); 12 MONTHS \$20,000 MCFADDEN, BRUCE A: FUNCTION AND REGULATION OF MICROBIAL ISOCITRATE LYASE (BOSILOO XOI); 12 MONTHS \$20,000

#### WISCONSIN

#### MARQUETTE UNIVERSITY

IRR, JOSEPH D; CONTROL OF ENERGY METABOLISM AND RNA SYNTHESIS (BOIGES 001); \$4,400

#### MEDICAL COLLEGE OF WISCONSIN

KASSELL, BEATRICE; NATURAL INHIBITORS OF PROTEOLYTIC EN-ZYMES (B018650 008); 24 MONTHS \$27,000

GIROTTI, ALBERT W; CHARACTERIZATION OF ACTIVE SITES IN HEMOPROTEINS (BORISH 601); 12 MONTHS \$15,000

MEHLER, ALAN H; THE MECHANISM OF AUTIUN OF ENEYMES (BO37440 001); 12 MONTHS \$20,000

#### UNIVERSITY OF WISCONSIN, MADISON

WILLIAMS, J W; SEDIMENTATION AND DIFFUSION MEASUREMENTS IN THE STUDY OF PROTEIN BEHAVIOR (BOSSICO 03); 12 MONTHS \$20,000 LARDY, HENRY A; A GENERAL PROGRAM ON ENZYMES INVOLVED IN ENERGY TRANSFER REACTIONS (BOSSITI X01); 12 MONTHS \$25,000

WELLS, ROBERT D: STUDIES WITH DEFINED DEOXYRIBONUCLEIC ACIDS (BOJOSEE XOO); 12 MONTHS \$40,000

HOKIN, LOWELL E; MOLECULAR CHARACTERIZATION OF THE SODI-UM-POTASSIUM TRANSPORT ADENOSINETRIPHOSPHATASE (BGS0852 X00); 12 MONTHS \$25,000

NOMURA, MASAYASU; STRUCTURE, FUNCTION AND ASSEMBLY OF RIBOSOMES (BOSIOSS XOO); 12 MONTHS \$75,000

WHITLOCK, H W; OPTIMIZATION OF M-RNA SEQUENCES AND NUCLEOTIDE SYNTHESIS BY COMPUTER (BISSIPET); M MONTHS \$3,000 O'LEARY, MARION H; HEAVY ATOM ISOTOPE EFFECTS AND ENZYME REACTION MECHANISMS (BOSSISS); 24 MONTHS \$42,000

### UNIVERSITY OF WISCONSIN, MADISON-MEDICAL SCHOOL

WEISBLUM, BERNARD; ARYTHROMYCIN INDUCIBLE RESISTANCE IN 'STAPHYLOCOCCUS AUREUS' (BOI)108 001); 24 MONTHS \$70,000

### PSYCHOBIOLOGY

#### CAUPORNIA

### STANFORD UNIVERSITY

GANZ, LEO; THE TOPOGRAPHY OF ATTENTION AT THE STRIATE CORTEX (BOISUP XOI); 12 MONTHS \$50,500

SHEPARD, ROGER N; COGNITIVE PSYCHOLOGY OF INTERNAL REPRESENTATION (BOJISTI X00); 12 MONTHS \$53,100

### UNIVERSITY OF CALIFORNIA, BERKELEY

MEREDITH, WILLIAM; STOCHASTIC PROCESS MODELS FOR PSYCHOLOGICAL TESTS (8030779); 24 MONTHS \$62,400

BARLOW, GEORGE W; POLYMURPHISM AND AGGRESSION (BOJ2192 X00): 12 MONTHS \$45,000

RILEY, DONALD A; ANIMAL DISCRIMINATION LEARNING AND IN-FORMATION PROCESSING (BOJ450J); 4 MONTHS \$16,200

### UNIVERSITY OF CALIFORNIA, DAVIS

MASON, WILLIAM A; SOCIAL ATTACHMENTS IN PRIMATES (BOJJ445); 12 MONTHS \$13,000

#### UNIVERSITY OF CALIFORNIA, IRVINE

BRAUNSTEIN, MYRON L; SENSITIVITY OF THE HUMAN OBSERVER TO TRANSFORMATIONS OF THE VISUAL FIELD (BORSTOL X01); 12 MONTHS \$16,500

#### UNIVERSITY OF CALIFORNIA. LOS ANGELES

HOLMAN, ERIC W; MATHEMATICAL STUDIES OF ANIMAL LEARNING (BOISSES XOI); 12 MONTHS \$18,500

GRINNELL, A D. DOCTORAL DISSERTATION RESEARCH - STUDIES OF ACOUSTIC COMMUNICATION (BOSO144); 24 MONTHS \$1,000

NORRIS, KENNETH S; DOCTORAL DISSERTATION RESEARCH IN MARINE MAMMALOGY (BOSOS)1), 24 MONTHS \$3,600

### UNIVERSITY OF CALIFORNIA, SAN DIEGO

REYNOLDS, GRORGE 8; STRUCTURE OF PERFORMANCE ON SCHEDULES OF REINFORCEMENT (BOJOSIA XOO); 12 MONTHS \$32,700 NORMAN, DONALD A; COMPUTER SIMULATION OF HUMAN SEMAN-

TIC MEMORY AND COGNITION (BOSESS X00°); 12 MONTHS \$50,000

### UNIVERSITY OF CALIFORNIA, SANTA BARBARA

DAYENPORT, DEMOREST; BEHAVIOR OF PLANKTERS (BOINGS 001); 24 MONTHS \$30,800

#### University of California, Santa Cruz

LE BOEUF, BURNEY J; ETHOLOGICAL STUDIES OF THE NORTHERN ELEPHANT SEAL (BOILLE XOI): 12 MONTHS \$18,600



#### STANFORD UNIVERSITY-SCHOOL OF MEDICINE

KESSLER, SEYMOUR; THE GENETIC AND HORMONAL BASES OF THE BRUCE EFFECT (BOJ1099); 24 MONTHS \$52,000

#### COLORADO

#### UNIVERSITY OF COLORADO

BATTIG, WILLIAM F, BOURNE, LYLE E, EKSTRAND, BRUCE R, CROTHERS, EDWARD J, AND KIMBLE, GREGORY A; COHERENT-AREA-OF-SCIENCE SUPPORT OF RESEARCH ON COGNITIVE FACTORS IN HUMAN LEARNING AND MEMORY (6014071 X00%); 12 MONTHS \$150,000

#### CONNECTICUT

#### YALR UNIVERSITY

CROWDER, ROBERT,G; THE REPRESENTATION OF INFORMATION IN SHORT-TERM MEMORY (BOISIST 001); 24 MONTHS \$52,500

RESCORLA, ROBERT A; CS-US CONTINGENCY IN PAVLOVIAN CONDI-TIONING (BOSSIOS XOI): 12 MONTHS \$32,867

WAGNER, ALLAN R; ACQUISITION LIMITING FACTORS IN ASSOCIA-TIVE LEARNING (BOSOSSS XOO); 12 MONTHS \$39.5.3

WAGNER, ALLAN R; ACQUISITION LIMITING FACTORS IN ASSOCIA-TIVE LEARNING (BOSOTO XOI); \$2,000

#### DISTRICT OF COLUMBIA

#### GRORGE WASHINGTON UNIVERSITY

WALK, RICHARD D; BEHAVIORAL SPACE PERCEPTION (B007837 001); 24 MONTHS \$41,700

#### GEORGETOWN UNIVERSITY

BRACKBILL, YVONNE; SENSORY AND PERCEPTUAL DEVELOPMENT IN INFANCY (8015154 009); 24 MONTHS \$52,800

#### FLORIDA

## MOTE MARINE LABORATORY

BREDER, CHARLES M JR; FISH SCHOOLING AND INTEGUMENTARY CHANGES (BO34317); 18 MONTHS \$14,400

### UNIVERSITY OF FLORIDA

DEWSBURY, DONALD A; EXPERIMENTAL ANALYSIS OF THE BEHAVIOR OF A VARIETY OF MAMMALS (BOSSESS X00): 12 MONTHS \$33,600

UNIVERSITY OF MIAMI-SCHOOL OF MARINE AND ATMOSPHERIC SCIENCES

MYRBERG, ARTHUR A JR; BEHAVIOR OF MARINE ANIMALS (BOSIOCO XOO): 12 MONTHS \$58,900

#### GEORGIA

#### EMORY UNIVERSITY-YERKES REGIONAL PRIMATE RESEARCH CENTER

DAVENPORT, RICHARD K; CROSS-MODAL PERCEPTUAL INTEGRA-TION IN PRIMATES (BOSETIS XOI): 12 MONTHS \$20,000

#### HAWAII

### UNIVERSITY OF BAWALL

HERMAN, LOUIS M; SENSORY AND LEARNING-MEMORY PROCESSES IN THE DOLPHIN (BOSELIE XOO); 12 MONTHS \$59,300

ASHTON, GEOFFREY C; GENETIC AND ENVIRONMENTAL BASES OF HUMAN COGNITION (BOSS1720); 12 MONTHS \$243,000

#### **HTINOIS**

### ILLINOIS STATE UNIVERSITY

WARD, JACK A; DEVELOPMENT AND REGULATION OF BEHAVIOR (BOSOSSE); 24 MONTHS \$32,300

WARD, JACK A; DOCTORAL DISSERTATION RESEARCH- DSVELOP-MENT OF BEHAVIOR IN THE YOUNG OF THE CICHLID FISHES (BGJ161); 12 MONTHS \$1,700

#### NORTHERN ILLINOIS UNIVERSITY

MCALLISTER, WALLACE R. AND MCALLISTER, DOROTHY E; CONDITIONED FEAR AND ITS EFFECTS ON BEHAVIOR (BOSSIST XOI); 12 MONTHS \$27,500

BELL, ROBERT W; INFANT VOCALIZATION AND EARLY EX-PERIENCE (BOJOSE): 24 MONTHS \$40,000

### SOUTHERN ILLINOIS UNIVERSITY - CARBONDALE

PIT2, GORDON F; INFORMATION INTEGRATION AND THE REVISION OF OPINION IN DECISION MAKING (BO22702 X01); 12 MONTHS \$21,900

MCHOSE, JAMES H; RELATIVE REINFORCEMENT EFFECTS (BOJOS10); 24 MONTHS \$30,700

#### UNIVERSITY OF CHICAGO

MCNEILL, G DAVID; SHORT TERM MEMORY FOR SPEECH (BOJ1127 XOO); 12 MONTHS \$39,400

#### INDIANA

#### PURDUE UNIVERSITY

SORKIN, ROBERT D; STUDIES OF TWO-CHANNEL AUDITORY SIGNAL PROCESSING (B014039 001); 24 MONTHS \$37,000

#### Indiana University, Indianapolie-school of Medicine

OCHS, SIDNEY; MECHANISM OF FAST AXOPLASMIC TRANSPORT OF MATERIALS IN NERVE FIBERS (B) 18864 X01); \$4,000

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#### UNIVERSITY OF IOWA

GORMEZANO, ISIDORE; CLASSICAL DEFENSE AND CLASSICAL RE-WARD CONDITIONING (BOOTFOT XOS): 12 MONTHS \$31,100 SCHULZ, RUDOLPH W; MEDIATION IN VERBAL PROCESSES (BOOSFSE XOS): 12 MONTHS \$21,500

#### KANSAS

#### UNIVERSITY OF KANSAS

MICHENER, CHARLES D; EVOLUTIONARY DEVELOPMENT OF BEE COLONIES (BOOSSE XOE): 12 MONTHS \$39,800

ARMITAGE, KENNETH B; ROLE OF BEHAVIOR IN POPULATION DYNAMICS (BOSSIS); 12 MONTHS \$17,300

#### MARYLAND

#### JOHNS HOPKINS UNIVERSITY

HULSE, STEWART H; CONSUMMATORY BEHAVIOR, APPETITIVE BEHAVIOR, AND PATTERNS OF REINFORCEMENT (BOSGIST 001), \$3,500

#### MASSACHUSETTS

#### BOSTON UNIVERSITY

HARRISON, J M; HEARING IN MAMMALS (BOTOLOG 001); 12 MONTHS \$11,000

JEANNE, ROBERT L. AND EVANS, HOWARD E; BEHAVIOR AND ECOLOGY OF DEFENSE ADAPTATIONS IN SOCIAL WASPS (BOISEIS); 26 MONTHS \$27,500

#### HARVARD UNIVERSITY

WILSON, EDWARD O; BEHAVIOR AND ORGANIZATION IN INSECT SOCIETIES (BOOTTS) 001: 24 MONTHS \$60,200

EVANS, HOWARD E; A COMPARATIVE APPROACH TO STEREOTYPED BEHAVIOR PATTERNS (BOOST44 002); 14 MONTHS \$21,100

PERKINS, DAVID N; EMPIRICAL STUDIES OF THE PERCEPTION AND PRODUCTION OF ART (BOSIOSS); 24 MONTHS \$87,900

#### SMITH COLLEGE

VOLKMANN, FRANCES C; THE APPLICATION OF TWO PSYCHOPHYSICAL METHODS TO PROBLEMS OF VISUAL DISCRIMINATION (BOJOBB4); 12 MONTHS \$6,200

### University of Massachusetts, amherst

KAMIL, ALAN C; ANALYSIS OF LEARNING-SET BEHAVIOR IN CYANOCITTA CRISTATA (BOSOSU); 24 MONTHS \$34,400

STUART, ALASTAIR M; EXPERIMENTAL STUDIES ON TERMITES (BOSSSIG X00); 12 MONTHS \$20,000

### MICHIGAN

#### EASTERN MICHIGAN UNIVERSITY

HOLMES, PETER A: FEAR EFFECTS OF RANDOM AND PREDICTABLE SHOCKS (B034393): 12 MONTHS \$8,000

### FORT CUSTER STATE HOME

HUTCHINSON, RONALD R; ENVIRONMENTAL CAUSES OF AGGRESSION (BOSSES XXO); 12 MONTHS \$18,100

### MICHIGAN STATE UNIVERSITY

EISENSTEIN, E M; ENCODING OF LEARNING IN ARTHROPOD GAN-GLIA (8023371 001); \$9,900

#### NORTHERN MICHIGAN UNIVERSITY

HAMM, H D; ACQUISITION VARIABLES IN CONDITIONED REIN-FORCEMENT (BOSOSO); 24 MONTHS \$27,500

HAMM, H D. ACQUISITION VARIABLES IN CONDITIONED REIN-FORCEMENT (BOSOSOO 001); \$1,800

### UNIVERSITY OF MICHIGAN

POLLACK, IRWIN; PERCEPTION OF TEMPORAL MICROSTRUCTURE OF AUDITORY SIGNALS (BO14034 X01); 12 MONTHS \$54,800

COOMBS, CLYDE H, AND TVERSKY, AMOS; JUDGEMENT AND CHOICE (B013653 001); 24 MONTHS \$83,200

KORNBLUM, SYLVAN; SEQUENTIAL EFFECTS AND PREPARATION PROCESSES IN SIMPLE AND CHOICE REACTION TIME (BOSOSIA); 24 MONTHS \$49,200

GREENO, JAMES G; COGNITIVE PROCESSES IN PROBLEM SOLVING (BOJIOJ); 24 MONTHS \$90,000

NISBETT, RICHARD E; INDIVIDUAL DIFFERENCES IN PSYCHOBIOLOGICAL FUNCTIONS MEDIATED BY THE HYPOTHALAMUS (BOSSES); 24 MONTHS \$67,600



#### MISSOURI

#### **WASHINGTON UNIVERSITY**

FOX, M W; BEHAVIORAL DEVELOPMENT AND SOCIAL ORGANIZATION IN CERTAIN CANIDS AND THEIR HYBRIDS (BOS4174); 12 MONTHS \$10,100

#### **NEBRASKA**

#### UNIVERSITY OF NEBRASKA AT LINCOLN

LINDEN, PAVID R; FEAR INHIBITION AS REINFORCEMENT OF AVOIDANCE LEHAVIOR (BOSOSII); 24 MONTHS \$26,400

#### MENN HERCEY

#### EDUCATIONAL TESTING SERVICE

LEWIS, MICHAEL; STUDIES OF ATTENTION IN INF. VNTS (BORRIOS 001);

LORD, FREDERIC M; MENTAL TEST THEORY AND METHODS (BOJETS)
X00): 18 MONTHS \$35,500

#### PRINCETON UNIVERSITY

GULLIKSEN, HAROLD; MATHEMATICAL TECHNIQUES IN PSYCHOLOGY (BOOSOSS XOS); 12 MONTHS \$13,100

RINCHLA, RONALD A; THE ROLE OF REFERENCE STIMULI IN DELAYED-COMPARISONS OF AUDITORY AMPLITUDES (BOSSIJS 001); 12 MONTHS \$11,500

#### **NEW MEXICO**

#### UNIVERSITY OF NEW MEXICO

LOGAN, FRANK A; CONDITIONS OF REINFORCEMENT (B012954 X02); 12 MONTHS \$38,700

#### **NEW YORK**

### AMERICAN MUSEUM OF NATURAL HISTORY

TAVOLGA, WILLIAM N; SENSORY CAPACITIES IN FISHES (BOOSSES 001); 24 MONTHS \$33,000

#### BROOKLYN COLLEGE

RAAB, DAVID H; SIGNAL DETECTION, MASKING AND INTENSITY DIS-CRIMINATION (BOIRELI XOI); 12 MONTHS \$26,100

#### COLUMBIA UNIVERSITY

TERRACE, H S; BY-PRODUCTS OF DISCRIMINATION LEARNING (BOJO781): 24 MONTHS \$93,700

#### CORNELL UNIVERSITY

DILGER, WILLIAM C; DOCTORAL DISSERTATION RESEARCH-BEHAVIORAL STUDY ON WOLVES (BOJIRDI); 12 MONTHS \$1,000

MORSE, ROGER A; REPRODUCTION IN HONEY BEES (BOJJ692 X00): 12 MONTHS \$11,200

### NEW YORK STATE PSYCHIATRIC INSTITUTE

GIBBON, JOHN; CONTINGENCIES OF AVERSIVE CONTROL (B6J4005); 24 MONTHS \$33,700

### NEW YORK UNIVERSITY

FALMAGNE, J C; FOUNDATIONS AND TESTS OF FECHNERIAN SCALING THEORY (BOSSESS); 24 MONTHS \$29,100

#### NEW YORK ZOOLOGICAL SOCIETY

STRUHSAKER, THOMAS T; FIELD STUDY OF PRIMATE BEHAVIOR AND ECOLOGY (B015147 X01); 6 MONTHS \$5,600

## ROCKEFELLER UNIVERSITY

PFAFFMANN, CARL; PHYSIOLOGICAL AND BEHAVIORAL MECHANISMS OF THE CHEMICAL SENSES, PRIMARILY TASTE (B015001 XGI), 12 MONTHS \$50,200

GRIFFIN, DONALD R; PHYSIOLOGICAL BASIS OF ORIENTATION

BEHAVIOR (BOSSIJS X01); 12 MONTHS \$30,100
BRADBURY, JACK W; COMPARATIVE STUDIES OF SOCIAL EVOLU-

TION IN MAMMALS (BOJEEJ4 X00); 12 MONTHS \$29,800
MARLER, PETER; COMPARATIVE STUDIES OF SOCIOBIOLOGY AND
COMMUNICATION (BOJJIOZ X00); 12 MONTHS \$60,600

#### STATE UNIVERSITY AT BINGHAMTON

FULLER, JOHN L; RECIPROCAL RELATIONS BETWEEN BEHAVIORAL AND NEUROLOGICAL SELECTION (BOX1827 001); 24 MONTHS \$49,100

#### STATE UNIVERSITY AT STONY BROOK

STAMM, JOHN S; CORTICAL EXCITABILITY CORRELATES OF LEARNING AND MEMORY (B013850 X01); 11 MONTHS \$50,000

### YESHIVA UNIVERSITY

ANISFELD, MOSHE; INTERNAL CODING (BO21280 001); 24 MONTHS \$24,800

#### NORTH CAROLINA

#### DUKE UNIVERSITY

STADDON, JOHN E R; TEMPORAL CONTROL AND THE THEORY OF REINFORCEMENT SCHEDULES (BOJ1125 X00); 12 MONTHS \$29,500

### UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

MUELLER, HELMUT C; EXPERIMENTAL ANALYSIS OF SOME ASPECTS OF PREDATORY BEHAVIOR (BOOSTI COI); 24 MONTHS \$20,000 JONES, LYLE V; EQUIPMENT AND PERSONNEL FOR A RESEARCH CENTER IN QUANTITATIVE PSYCHOLOGY (BOSIOSE XOO); 12 MONTHS \$94,000

LOLORDO, VINCENT M; RESPONSE-INDEPENDENT REINFORCE-MENT (BOSIOSS); 24 MONTHS \$46,600

#### OHIO

#### BOWLING GREEN STATE UNIVERSITY

NAGY, Z MICHAEL; ONTOGENY OF LEARNING AND MEMORY IN MAMMALS (BOJO456); 24 MONTHS \$42,000

BADIA, PIETRO; RELATIVE REINFORCEMENT IN AVERSIVE SITUA-TIONS-ANALYSIS OF POSITIVE AND NEGATIVE COMPONENTS (BOSITES): 24 MONTHS \$80,000

#### KENT STATE UNIVERSITY

MYER, JAMES S; LEARNING AND THE STIMULUS CONTROL OF IN-STINCTIVE BEHAVIOR (BOJISJS); 14 MONTHS \$24,600

#### MIAMI UNIVERSITY

JAHNKE, JOHN C; REPETITION OF ELEMENTS AND MEMORY (BORRTOR XOI); 12 MONTHS \$17,000

SIMMEL, EDWARD C; SENSORY AND SOCIAL YARIABLES AFFECTING PRIMING OF AGONISTIC BEHAVIOR IN INBRED MICE (BOJJ45); 24 MONTHS \$19,500

#### OHIO STATE UNIVERSITY

WICKENS, DELOS D; WORD ENCODING AND MEMORY (BOSSESSO): 24 MONTHS \$26,000

#### UNIVERSITY OF CINCINNATI

DEMBER, WILLIAM N; INHIBITION AND ENHANCEMENT OF HUMAN VISUAL PERFORMANCE (BOSJ661); 24 MONTHS \$29,800

#### WESTERN COLLEGE

SCHNUR, PAUL; LATENT INHIBITION AND CLASSICAL CONDITION-ING (BOJJ688); 24 MONTHS \$17,200

#### OKLAHOMA

#### OKLAHOMA STATE UNIVERSITY

MILLER, RUDOLPH J; EVOLUTION AND CAUSATION OF SOCIAL BEHAVIOR IN ANABANTOID FISHES (BGJ1972); 24 MONTHS \$38,200

### UNIVERSITY OF OKLAHOMA

CARPENTER, CHARLES C; ANALYSIS OF SIGN STIMULI IN THE DIS-PLAYS OF IGUANID LIZARDS (BOSISSE), 24 MONTHS \$20,100

#### OREGON

MEDICAL RESEARCH FOUNDATION OF OREGON-OREGON REGIONAL PRIMATE RESEARCH CENTER

MONTAGNA, WILLIAM, AND GRAND, THEODORE; TRAVEL ASSISTANCE FOR PARTICIPANTS IN FOURTH INTERNATIONAL PRIMATOLOGY CONGRESS (B039280); 12 MONTHS \$15,500

#### PENNSYLVANU

## ACADEMY OF NATURAL SCIENCE OF PHILADELPHIA

GILL, FRANK B, AND WOLF. LARRY L; ECOLOGY OF SOCIAL BEHAVIOR (B028956 X01): 15 MONTHS \$40,500

#### PENNSYLVANIA STATE UNIVERSITY

COFER, CHARLES N; ORGANIZATIONAL AND CONSTRUCTIVE PROCESSES IN HUMAN MEMORY (BOJO11): 24 MONTHS \$39,100

TRUMBO, DON A, NOBLE, MERRILL E, AND MARTIN, JAMES E; IN-FORMATION PROCESSING AND SKILLED PERFORMANCE (BOJ1130); 24 MONTHS \$72,200

### UNIVERSITY CITY SCIENCE CENTER

EPPLE, GISELA; CHENICAL COMMUNICATION IN PRIMATES (BOSSIO); 12 MONTHS \$27,200

EPPLE, GISELA; CHEMICAL COMMUNICATION IN PRIMATES (BOSSIO) X01); \$13,100

### UNIVERSITY OF PENNSYLVANIA

ROZIN, PAUL; ADAPTIVE SPECIALIZATIONS IN LEARNING AND MEMORY (Boosols ool); 6 MONTHS \$8,800

ROZIN, PAUL; READING STUDIED WITHIN AN ADAPTIVE EVOLU-TIONARY FRAMEWORK (BOOSOIS COS); 15 MONTHS \$21,600

SMITH, W J; ANIMAL COMMUNICATION- USE OF PATTERN IN CONTINUOUS SIGNALLING (B018957 Xc1). 12 MONTHS \$20,800

#### UNIVERSITY OF PITTSBURGH

YOSS, JAMES F; ASSOCIATIVE ENCODING (BOJOSSE): 24 MONTHS \$38.200

#### RHODE ISLAND

### BROWN UNIVERSITY

SCHRIER, ALLAN M; DISCRIMINATION LEARNING IN PRIMATES (B018935 X03); 12 MONTHS \$30,000



MILLWARD, RICHARD B; ATTENTION, MEMORY, AND STRATEGY IN CONCEPT LEARNING (BOSSISE); 24 MONTHS \$18,500

#### TEMMERCEE

UNIVERSITY OF TENK SSSEE, KNOXVILLE-SPACE INSTITUTE

HELVEY, T C; CONFERENCE ON COMPUTER APPLICATIONS IN RUMAN COMMUNICATION (BOSOSSE); 12 MONTHS \$2,000

#### TEXAS

UNIV OF TEXAS AT AUSTIN

AMSEL, ABRAM; DEVELOPMENT AND TRANSFER OF PERSISTENCE EFFECTS (8014960 X01); 12 MONTHS \$33,900

#### UTAH

UNIVERSITY OF UTAH

PROKASY, WILLIAM F: MODELS FOR CLASSICAL CONDITIONING (BOSOSSY X00); 18 MONTHS \$22,000

UTAH STATE UNIVERSITY

STOKES, ALLEN W, AND BALPH, DAVID F; EQUIPMENT AND FACILI-TIES FOR GREEN CANYON STATION-A FACILITY FOR THE STUDY OF ANIMAL BEHAVIOR (BOSSOSS); 12 MONTHS \$17,000

#### VIRGINIA

VIRGINIA STATE COLLEGE

JOHNSON, JAMES TERRY: COSIP D RESEARCH INITIATION - BEHAVORIAL CONTRASTS IN MULTIPLE SEDMAN AVOIDANCE SCHEDULES (Y010141); 15 MONTHS \$21,100

UNIVERSITY OF VIRGINIA-SCHOOL OF MEDICINE

COHEN, DAVID H; NEURAL MECHANISMS OF CARDIAC CONDITION-ING (8018814 X01): 12 MONTHS \$32.600

#### WASHINGTON

UNIVERSITY OF WASHINGTON

ALCOCK, JOHN; EXPERIMENTAL STUDIES OF ADAPTIVE MODIFICA-TIONS IN FORAGING BEHAVIOR (B028714 X01); \$5,500

PAULSON, DENNIS R; ISOLATING AND RELEASING MECHANISMS IN DRAGONFLIES (BOJJOST), 24 MONTHS \$18,400

#### WISCONSIN

UNIVERSITY OF WISCONSIN, MADISON

EMLEN, JOHN T; EVOLUTION OF VERTEBRATE SOCIAL SYSTEMS (B015304 X01); 12 MONTHS \$38,000

BMLEN, JOHN T, AND EMLEN, JOHN T JR; GROUP-SPECIFIC COMMU-NICATION PATTERNS IN PRIMATES (BOISSE 002): 12 MONTHS \$35,900 SMITH. KARL U; FEEDBACK ANALYSIS OF BINOCULAR EYE-MOVE-MENT AND DEPTH FERCEPTION TRACKING MECHANISMS (BOSER'S X00): 13 MONTHS \$32,600

UNIVERSITY OF WISCONSIN, MILWAUKEE

HAY, JOHN C; DISCRIMINATION OF VIEWPOINT CHANGES FROM OB-JECTIVE CHANGES (90JJ148); 24 MONTHS \$33,300

### NEUROBIOLOGY

#### **ARKANSAS**

UNIVERSITY OF ARKANSAS-UNIVERSITY OF ARGANSAS MEDICAL CENTER

POWELL, ERVIN W; PROJECTIONS OF THE CINGULATE GYRUS (BOSTITO); 24 MONTHS \$32,000

### CALIFORNIA

CALIFORNIA INSTITUTE OF TECHNOLOGY

VAN HARREVELD, ANTHONIA: INVESTIGATIONS OF PHYSIOLOGICAL PROCESSES (B016961 001): 24 MONTHS 163,000

MOUNT ZION HOSPITAL & MEDICAL CENTER

LIBET, BENJAMIN, ALBER1S, W WATSON, AND FEINSTEIN, BERTRAM; CEREBRAL PROCESSES IN CONSCIOUS SENSATION IN MAN (BOJOSSE X00); 12 MONTHS \$35,000

ALK INSTITUTE FOR BIOLOGICAL STUDIES

HEINEMANN, STEPHEN F; INTERACTION OF CLONED LINES OF NERVE AND MUSCLE (B031340); 24 MONTHS \$75,000

STANCORD RESEARCH INSTITUTE

KELLY, DONALD H; ANTAGONISTIC INTERACTIONS AMONG SPA-TIAL, TEMPORAL AND CHROMATIC ASPECTS OF VISUAL INFORMA-TION (BOJJIEF X00); 12 MONTHS \$35,000

STANFORD UNIVERSITY

SCHUBERT, EARL D; TIMING PATTERNS FROM DIFFERENT POINTS IN THE COCHLEA (Bost 145); 24 MONTHS \$45,000

UNIVERSITY OF CALIFORNIA, BERKELEY

DE VALOIS, RUSSELL L; PRIMATE COLOR VISION (BOILSON XOZ); 12 MONTAS \$34,700

TIMIRAS, PAOLA B; EFFECTS OF THYROID HORMONES ON MYELIN AND GLIAL MEMBRANE IN THE DEVELOPING BRAIN (BOSSESS COI); 81.000

ROSENZWEIG, MARK R. AND DIAMOND, MARIAN C; PLASTICITY OF BRAIN AND MECHANISMS OF MEMORY (BOJOSS X00); 18 MONTHS 489,700

STENT, OUNTHER S; NEURONAL FUNCTION AND LOCOMOTORY CON-TROL (BOS1853 X00); 12 MONTHS \$41,000

MARO, ELWIN; CHANGES OF VISUAL RECEPTIVE FIELDS WITH FIX-ATION DISTANCE (BOSSISS): 24 MONTHS \$34.400

#### UNIVERSITY OF CALIFORNIA, DAVIS

HENRY, KENNETH R; ACOUSTIC PRIMING OF AUDIOGENIC SEIZURES (BOJISSI); 24 MONTHS \$32,000

UNIVERSITY OF CALIFORNIA, SAN DIEGO

OREEN, DAVID M; POISSON MODELS OF PSYCHOPHYSICAL PROCESSES (BOJOIS & XOO), 12 MONTHS \$37,500

BULLOCK, THEODORE H; NEURONAL INTEGRATIVE MECHANISMS AND THEIR ORGANIZATION IN USEFUL SYSTEMS (BOSON X00); 12 MONTHS \$85,000

University of California, San Francisco

TREVOR, ANTHONY J, AND SHIRACHI, DONALD Y; TETRODOTOXIN AND SAXITOXIN RECEPTOR ISOLATION (BOSSOT X00); 12 MONTHS \$19.909

### UNIVERSITY OF CALIFORNIA, SANTA BARBARA

KUNO, CHING; GENETIC DISSECTION OF EXCITABLE MEMBRANES (BOJ2104 X00); 12 MONTHS \$37,000

CASE, JAMES F; NEUROPHYSIOLOGICAL BASIS OF BIOLUMINESCENT COMMUNICATION (BOSISSE X00); 18 MONTHS \$15,600

UNIVERSITY OF SOUTHERN CALIFORNIA

BISHOP, LEWIS G; NEURAL ENCODING OF BEHAVIOR- COLOR VISION AND IMAGE PROCESSING (BOXO715); 24 MONTHS \$22,400

LOMA LINDA UNIVERSITY-SCHOOL OF MEDICINE

AUSTIN, GEORGE; INVESTIGATION OF CEREBROVASCULAR MECHANICS (BOS 1853); 24 MONTHS \$45,700

STANFORD UNIVERSITY-SCHOOL OF MEDICINE

SHOOTER, ERIC M; STRUCTURE AND MECHANISM OF ACTION OF THE NERVE GROWTH FACTOR (BOJISTS): 24 MONTHS \$46,000

UNIVERSITY OF CALIFORNIA, LOS ANGELES-SCHOOL OF MEDICINE
ADEY, WILLIAM R. AND COSTIN. ANATOL: CERERRAL INTERCELLU

ADEY, WILLIAM R. AND COSTIN, ANATOL; CEREBRAL INTERCELLU-LAR AND CELL SURFACE MACROMOLECULES (B027740 X01); 12 MONTHS \$30.500

ROBERTS, SIDNEY; LOCALIZATION AND FUNCTIONS OF NEUROHOR, MONE-SENSITIVE ADENYL CYCLASES IN THE BRAIN (BOJOJOO); 24 MONTHS \$50,000

ELUL, RAFAEL; NEUROPHYSIOLOGICAL MECHANISMS OF THE ELECTROENCEPHALOGRAM-MICROELECTRODE ANALYSIS OF INTERNEURONAL COUPLING (BOSOLISE); 12 MONTHS \$25,000

HERSCHMAN, H R; DEVELOPMENTAL REGULATION OF BRAIN-SPECIFIC PROTEIN SYNTHESIS (BOYOSIO); 24 MONTHS \$46,000 TAYLOR ANNA N. CENTRES (BOYOSIO); 25 MONTHS \$46,000

TAYLOR, ANNA N; CENTRAL NERVOUS SYSTEM MECHANISMS IN ENDOCRINE RESPONSES TO STRESS (BOJ1174); 24 MONTHS \$40,000

UNIVERSITY OF CALIFORNIA, SAN DIEGO-SCHOOL OF MEDICINE

ROSENBERG, ROGER N; METABOLISM OF ACETYLCHOLINE IN MYASTHENIA GRAVIS (8028528 X01); 12 MONTHS \$21,000

UNIVERSITY OF SOUTHERN CALIFORNIA-SCHOOL OF MEDICINE
LINDSLEY, DAVID F; BRAIN MECHANISMS OF ATTENTION AND PERCEPTION (BOJJ 40): 24 MONTHS 140,000

#### COLOSADO

COLORADO STATE UNIVERSITY

ABEL, JOHN H JR: STEROID BINDING NEURONS IN THE LIMBIC SYSTEM (BOSSSE); 12 MONTHS \$31,600

UNIVERSITY OF COLORADO

MACGREGOR, RONALD J; MODELS OF NEURAL NETWORKS (BOSSEST); 24 MONTHS \$37,500

BATTIG, WILLIAM F, BOURNE, LYLE E, EKSTRAND, BRUCE R, CROTHERS, EDWARD J, AND KIMBLE, GREGORY A; COHERENT-AREA-OF-SCIENCE SUPPORT OF RESEARCH ON COGNITIVE FACTORS IN HUMAN LEARNING AND MEMORY (BOSLOTT X00-); 12 MONTHS \$40,000

#### CONNECTICUT

UNIVERSITY OF BRIDGEPORT

GILINSKY, ALBERTA S; INTEGRATIVE MECHANISMS IN PERCEPTION (BOSTOSS): 12 MONTHS \$15,000

YALE UNIVERSITY

RUBEL, EDWIN W; ONTOGENY OF VERTEBRATE SENSORY PROCESSES (BOJ1934); 24 MONTHS 444,300

YALE UNIVERSITY-SCHOOL OF MEDICINE

LENTZ. THOMAS L; TROPHIC FUNCTION OF NERVES DURING REGENERATION (BORGOS 001); 24 MONTHS \$46,000



#### UNIVERSITY OF CONNECTICUT-REALTH CENTER

MCKELVY, JEFFRY F: HYPOTHALAMIC RELEASING FACTOR BIOSYNTHESIS (BOSISM): 24 MONTHS 250,000

#### DISTRICT OF COLUMBIA

### AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES

OLIVE, JOHN B; AMERICAN TABLES COMMITTEE FOR NAPLES ZOOLOGICAL STATION (B007584 008); 9 MONTHS \$1,000

#### AMBRICAN SOCIETY FOR CYBERNETICS

HERRMANN, ROY; CONFERENCE ON THE MODELING OF COMPLEX SYSTEMS IN THE PURSUIT OF NATIONAL GOALS (BOSIGES); 6 MONTHS 83750

#### HOWARD UNIVERSITY

HOLLOWAY, JAMES A; DORSAL HORN CELL INTERGRATIVE MECHANISMS IN BIRDS AND AMPHIBIANS (BOJ494); 12 MONTHS \$25,200

#### NATIONAL ACADEMY OF SCIENCES

DUNHAM, CHARLES L; U.S. NATIONAL COMMITTEE FOR THE INTER-NATIONAL BRAIN RESEARCH ORGANIZATION (IBRO) (C#10#44\*); 12 MONTHS \$5000

#### PLORIDA

### FLORIDA STATE UNIVERSITY

GRAZIADEI, PASQUALE P C; COMPARATIVE STUDIES ON SENSORY RECEPTORS AND PATHWAYS (BOISLI XOI); 12 MONTHS \$25,400

KENSHALO, D R; BEHAVIORAL AND ELECTROPHYSIOLOGICAL IN-VESTIGATIONS OF TEMPERATURE SENSITIVITY OF PRIMATES (BOIGHO): 24 MONTHS \$45,000

BERKLEY, MARK A; BEHAVIORAL AND ELECTROPHYSIOLOGICAL CORRELATES OF SPATIAL VISION IN THE MAMMALIAN VISUAL SYSTEM (BOS4166); 24 MONTHS \$35,400

#### UNIVERSITY OF FLORIDA

ISAACSON, R L; EARLY BRAIN DAMAGE AND BEHAVIOR (B017\$45 001); 24 MONTHS \$65,000

DAWSON, WILLIAM W; ORIGINS OF THE FAST RETINAL POTENTIALS (BOSIELE X00); 12 MONTHS \$27,000

### UNIVERSITY OF MIAMI-SCHOOL OF MEDICINE

LOEWENSTEIN, WERNER R; CELL DEVELOPMENT AND DIF-FERENTIATION (BOSCOSS): 12 MONTHS \$60,000

### GEORGIA

### EMORY UNIVERSITY

DEFELICE, LOUIS 3; ELECTRICAL NOISE IN BIOLOGICAL AND ARTIFICIAL MEMBRANES (BO34716); 36 MONTHS \$6,000

#### EMORY UNIVERSITY. YERKES REGIONAL PRIMATE RESEARCH CENTER

MANOCHA, SOHAN L; CYTOCHEMISTRY OF NERVOUS SYSTEM IN EX-PERIMENTAL PROTEIN MALNUTRITION IN PRIMATES (BOSOJSE); 12 MONTHS \$25,000

NADLER, RONALD D; SEXUAL DIFFERENTIATION OF THE BRAIN (BOSGST); 24 MONTHS \$36,100

#### HAWAII

#### UNIVERSITY OF HAWAII-SCHOOL OF MEDICINE

GILLARY, HOWARD L; ELECTRICAL ACTIVITY IN PHOTORECEPTORS (8034081): 24 MONTHS \$45,000

#### **ILLINOIS**

### CHICAGO MEDICAL SCHOOL

ALIVISATOS, SPYRIDON G A; ROLE OF SCHIFF BASES IN THE CNS AS INTERMEDIATES IN THE FORMATION OF TETRAHYDROISOQUIN-OLINE ALKALOIDS (8040495); 12 MONTHS \$18,800

### ILLINOIS STATE PSYCHIATRIC INSTITUTE

BRUNNGRABER, ERIC G; STRUCTURE OF BRAIN GLYCOPROTEINS (BOSS624); 24 MONTHS \$34,700

#### NORTHWESTERN UNIVERSITY

GESTELAND, ROBERT C, AND FARBMAN, ALBERT I; INTRACELLU-LAR STUDY OF OLFACTORY AND GUSTATORY RECEPTORS (BO30340); 24 MONTHS \$50,000

#### WONTHS \$50,000 UNIVERSITY OF CRICAGO

SPYROPOULOS, C S; DEPENDENCE OF THE MEMBRANE POTENTIAL ON EXTERNAL ELECTROLYTE CONCENTRATION (B030827); 12 MONTHS 220,000

### UNIVERSITY OF ILLINOIS AT URBANA

DONCHIN, EMANUEL; SLOW CORFICAL POTENTIALS DURING PER-FORMANCE OF COGNITIVE TASKS (BOSOSS); 24 MONTHS \$40,000

#### LOYOLA UNIVERSITY-STRITCH SCHOOL OF MEDICINE

NISHI, SYOGORO; CELLULAR NEUROPHYSIOLOGY OF MAMMALIAN PARASYMPATHETIC GANGLIA (BOJOJSO X00); 12 MONTHS \$24,800

#### INDIANA

#### INDIANA UNIVERSITY, BLOOMINGTON

SUTHERS, RODERICK A; VISUAL AND AUDITORY INTERACTION IN THE BRAIN OF A FACULTATIVE ECHOLOCATOR (BOISTSI 601); 94 MONTHS \$62,000

MAHLER, HENRY R. AND MOORE, WALTER J; PROTEIN SYNTHESIS IN INVERTEBRATE PHOTORECEPTORS (BOITIST 001); 24 MONTHS \$40,000 NEFF, WILLIAM D; STUDIES OF SENSORY DISCRIMINATION (BOITSET XO)); 12 MONTHS \$36,500

#### PURDUE UNIVERSITY

LANGFORD, TED L; NEURAL BASES OF DIRECTIONAL HEARING (BASEAT); 24 MONTHS \$40,000

#### UNIVERSITY OF NOTRE DAME

ESCH, HARALD E; NEUROPHYSIOLOGICAL STUDIES OF COMMUNICATION (BOISIS | 001); 24 MONTHS \$40,600

ADLER, KRAIG; STUDIES ON LIGHT RECEPTORS AND MECHANISMS FOR ORIENTATION (BOSOSIT); 12 MONTHS \$18,100

### Indiana University, Indianapolis-school of medicine

OCHS, SIDNEY; MECHANISM OF FAST AXOPLASMIC TRANSPORT OF MATERIALS IN NERVE FIBERS (BORRER XOR): 12 MONTHS \$29,100 APRISON, M H; IDENTIFICATION OF NEUROTRANSMITTERS (BORRIS

X01): 12 MONT HS \$21,000

### MARYLAND

### BALTIMORE CITY HOSPITAL

KAMBACK, MARVIN C; PREFRONTAL CORTICAL ABLATIONS AND AT-TENTIONAL DEFICITS (B030434); 12 MONTHS \$25,200

#### FEDERATION OF AMER SOCIETIES FOR EXPER BIOLOGY

FEATHERSTONE, ROBERT M; FIFTH INTERNATIONAL CONGRESS ON PHARMACOLOGY (B03/154); 12 MONTHS \$10,000

#### MASSACHUSETTS

#### MARINE BIOLOGICAL LABORATORY

EBERT, JAMES D; SUPPORT OF A CHARTER VESSEL FOR COLLECTING MATERIALS FOR RESEARCH IN NEUROBIOLOGY (BOSSES X00); 12 MONTHS \$15,000

### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SCHMITT, FRANCIS O; PROBLEMS OF BRAIN AND BEHAVIOR (BOSS781 X00); 12 MONTHS \$60,800

#### NORTHBASTERN UNIVERSITY

SANDLER, SHELDON S, AND FINE, SAMUEL; THE STRUCTURE OF THE CORNEA (BOSO350): 24 MONTHS \$50,100

#### UNIVERSITY OF MASSACHUSETTS, AMHERST

FITE, KATHERINE V; RETINAL PROJECTIONS TO THE DIEN-CEPHALON (BOSOSEI); 24 MONTHS \$27,300

### WOODS HOLE OCEANOGRAPHIC INSTITUTION

ATEMA, JELLE, BOYLAN, DAVID B, AND TODD, JOHN H; CHEMICAL COMMUNICATION IN MARINE ANIMALS (BOJISS); 12 MONTHS \$40,000

### TUFTS UNIVERSITY SCHOOL OF MEDICINE

MAUTNER, HENRY G: ACTIVE SITES OF BIOPOLYMERS INVOLVED IN NERVE CONDUCTION (BG)1843); 24 MONTHS \$88,800

#### MICHIGAN

#### MICHIGAN STATE UNIVERSITY

JOHNSON, JOHN 1; DETERMINING FACTORS IN BRAIN EVOLUTION (BOSO783); 24 MONTHS \$47,300

ZACKS, JAMES L; VISUAL ADAPTATION (BOSISIS); 6 MONTHS \$3,500 HEISEY, S RICHARD; COMPARATIVE PHYSIOLOGY OF CEREBROSPINAL FLUID (BOSISIS); 24 MONTHS \$39,600

### UNIVERSITY OF MICHIGAN

AGRANOFF. BERNARD W; CHEMICAL CORRELATES OF MEMORY (BOJ4109 X00): 12 MONTHS \$39,000

### MISSOURI

#### WASHINGTON UNIVERSITY

SUGA, NOBUO; NEURAL PROCESSING OF ACOUSTIC INFORMATION FOR COMMUNICATION AND NAVIGATION (BUISD) 001); 24 MONTHS \$85,000

### NEBRASKA

### UNIVERSITY OF NEBRASKA MEDICAL CENTER AT OMAKA

CLARK, FRANCIS J; ORIGIN AND CODING OF POSITION INFORMA-TION FROM LIMBS (BOSSIES); 24 MONTHS \$40,000

#### NEW JERSEY

#### PRINCETON UNIVERSITY

HOEBEL, BARTLEY G; NEURAL INTERACTION IN THE REGULATION OF MOTIVATED BEHAVIOR (BOOSIS) XO2); 12 MONTHS \$31,900



KONISHI, MASAKAZU: BEHAVIORAL AND PHYSIOLOGICAL STUDIES OF BIOACOUSTICS (BOIRTER DOS), 24 MONTHS \$59,900

#### BUTGERS UNIVERSITY

LITCHFIELD, CARTER; THE ACOUSTICAL FUNCTION OF LIPIDS IN ODONTOCETE ECHOLOCATION (BOSOSS); 24 MONTHS \$36,000

#### NEW MEXICO

NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY

SCHAFER, ROLLIE; MICROTUBULE FUNCTION IN NEURONS (BOSSOS): 12 MONTHS 48,200

#### NEW YORK

BROOKLYN COLLEGE

GUTTMAN, RITA; EXCITATION PROCESS IN NERVE (B028587 001); 24 MONTHS \$30,500

# CORNELL UNIVERSITY

HALPERN, BRUCE P; CENTRIFUGAL MODULATION OF GUSTATORY RESPONSES (BOSSIGE): 24 MONTHS 443,000

# DOWNSTATE MEDICAL CENTER AT BROOKLYN

FORD, DONALD H; CONFERENCE ON THE NEUBOBIOLOGICAL ASPECTS OF MATURATION AND AGING (BOJEJES): 12 MONTHS \$5,000

#### JEWISH HOSPITAL OF REGOKLYN

BERMAN, A J; THE EFFECTS OF CEREBELLAR LESIONS ON AGGRES. SIVE BEHAVIOR (8030990), 28 MONTHS \$22,000

#### OCKEPELLER UNIVERSITY

RATLIFF, FLOYD; MULTINEURON ANALYSES OF RETINA.
MECHANISMS OF VISION (BOOGS 40 XOS); 12 MONTHS \$17,500

ISON, JAMES R; FACILITATION AND INHIBITION OF REFLEXIVE BEHAVIOR (BOI4814 004); 24 MONTHS \$60,100

MAURO, ALEXANDER: ELECTROPHYSIOLOGICAL STUDY OF EXTRA-OCULAR PHOTORECEPTORS (BOIDTS) 001); 3 MONTHS \$1,900

WEISS, PAUL A; INTEGRATIVE TREATISE ON NEURONAL FLOW (BOJIIJ): 24 MONTHS \$60,000

#### STATE UNIVERSITY AT STONY BROOK

BROWN, LEROY T; FINE STRUCTURE OF MAMMALIAN SPINAL CORD (8631179); 24 MONTHS \$40,300

IRVING. RONALD E; COMPARATIVE ANATOMICAL INVESTIGATION
OF THE AUDITORY SYSTEM (BULLEY): 24 MONTHS \$41.700

# SYRACUSIL UNIVERSITY

WAYNER, MATTHEW J: NEURAL REGULATION OF INGESTIVE BEHAVIOR (B01814 002); 12 MONTHS \$29,100

# UNIVERSITY OF ROCHESTER

KELLY, DONALD H; EFFECTS OF CHROMATIC ADAPTATION ON SINE-WAVE THRESHOLDS (BOJOTEL); 10 MONTHS \$9,800

BROWN, JOHN LOTT; CONFERENCE- DEVELOPMENTAL ASPECTS OF VISION (B034519); 12 MONTHS \$4,800

COLUMBIA UNIVERSITY-COLLEGE OF PHYSICIANS AND SURGEONS

KARLIN. ARTHUR; MOLECULAR INTERACTIONS OF THE ACETYLCHOLINE RECEPTUR (B015906 001); 24 MONTHS \$56,600

SIMPSON, LANCE L; MECHANISM OF ACTION OF TYPE A BOTU-LINUM TOXIN (BOJ1166); 24 MONTHS \$35,000

# CORNELL UNIVERSITY-MEDICAL COLLEGE

SECHZER, JERI; DEVELOPMENT AND LEARNING (BOJJ69): 24 MONTHS \$40,000

UNIVERSITY OF ROCHESTER-SCHOOL OF MEDICINE AND DENTISTRY WOODWARD, DONALD J; DEVELOPMENT OF CEREBELLUM (B028873 X01): 12 MONTHS \$28,500

# **NORTH CAROUNA**

# DUKE UNIVERSITY

PEELE, TALMAGE L; STUDY OF THE AMYGDALA AND CORTICO-AMYGDALAR CONNECTIONS (BOJOSS); 24 MONTHS \$26,400 FRILKSON BODER D. NEURAL CODE FOR TASTE (BRUINE FOR).

ERICKSON, ROBERT P; NEURAL CODE FOR TASTE (BOSSIGN X00); 12 MONTHS \$25,000

### NORTH CAROLINA FON MENTAL HITH RES-D DIX HOSP

OPPENHEIM, RONALD W, AND FOELIX, RAINER F; SYNAPTOGENSIS AND FUNCTION OF EMBRYONIC SPINAL CORD (BOJISTA); 24 MONTHS \$43.200

## UNIVERSITY OF NORTH CAROLINA AT GREENSBORO

HARTER, M. RUSSELL; PERCEPTION AND VISUALLY EVOKED CORTI-CAL RESPONSE CORRELATES OF PATTERNED STIMULI (B00803) 001); [2 MONTHS \$24,900

# UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL-SCHOOL OF MEDICINE

OBRIST, PAUL A: A CONFERENCE ON CONTEMPORARY TRENDS IN PSYCHOPHYSIOLOGY (8031611): 12 MONTHS \$6,000

# OHIO

#### UNIVERSITY OF TOLEDO

DIEHN, BODO; BIOCHEMISTRY AND BIOPHYSICS OF PHOTOTAXIS (BOISTOI 001); 24 MONTHS \$37,500

#### OREGON

UNIVERSITY OF OREGON - EUGENE

TUNTURI, ARCHIE R; ANATOMIC STUDY OF THE NERVE NETWORKS OF THE AUDITORY CORTEX (Boldist 001); 24 MONTHS \$60,000

KINBLE, DANIEL P. BSHAVIORAL FUNCTIONS OF THE MAMMALIAN HIPPOCAMPUS (BOSOJII); 24 MONTHS \$40,000

HOYLE, GRAHAM; NEURAL MECHANISMS UNDERLYING BEHAVIOR (BOJNO 18 NONTHS \$49,000

# PENNSYLVANIA

# ALBERT BINSTEIN MEDICAL CENTER

BOROFF, DANIEL A; CHEMISTRY AND BIOLOGICAL ACTIVITY OF THE NEUROTOXIN OF CLOSTRIDIUM BOTULINUM (Bojosse); 18 MONTHS \$30,000

# **BRYN MAWR COLLEGE**

OPPENHEIMER, JANE 11; DEVELOPMENTAL STUDIES ON FUNDULUS (BOJJ309 X00); 12 MONTHS \$11,800

#### TEMPLE UNIVERSITY

ROBERTS, SHEPHERD K, AND MOTE, MICHAEL I; LOCALIZATION OF BIOLOGICAL CLOCK ACTIVITY IN THE BRAIN (BOJOLP7); 24 MONTHS \$35,300

# UNIVERSITY OF PENNSYLVANIA

HURVICH, LEO M, QUANTITATIVE THEORETICAL AND EXPERIMENTAL ANALYSIS OF ANOMALOUS COLOR VISION (BOSTORS): 24 MONTHS \$42,000

TEITELBAUM, PHILIP; NEUROCHEMICAL ANALYSIS OF THE LATERAL HYPOTHALAMIC SYNDROME (BOJJ410); 12 MONTHS \$20,000 BRAUN, PETER E; BIOCHEMICAL MECHANISMS OF NERVE CONDUCTION (BOJJ713); 24 MONTHS \$50,000

MULTTERTIES, E. L. AND PRETI, GEORGE: STUDY OF THE COM-PONENTS IN MAMMALIAN SECRETIONS AND EXCRETION (BOJ 1879); 12 MONTHS \$34,600

# UNIVERSITY OF PITTSBURGH

STRICKER, EDWARD M; PSYCHOBIOLOGY OF BODY FLUID REGULA-TION (Bollsho Xol); 12 MONTHS \$25,000

# TEMPLE UNIVERSITY-SCHOOL OF MEDICINE

WANG, MICHAEL B; THE NEURAL CODING OF THE TASTE SENSA-TION IN THE RAT AND HAMSTER (BOJIS\$); 24 MONTHS \$11,900

# UNIVERSITY OF PENNSYLVANIA-SCHOOL OF MEDICINE

FLEXNER, LOUIS B, AND SEROTA, ROGER G; ROLE OF NOREPINEPHRINE IN MEMORY (BOJOSOJ); 12 MONTHS \$26,800

KISSILEFF, HARRY R, AND QUARTERMAIN, DAVID; GASTROIN-TESTINAL CONTROLS OF FOOD INTAKE (BOJJEIP); 24 MONTHS \$60,100

# UNIVERSITY OF PITTSBURGH-SCHOOL OF MEDICINE

MAST, TRUMAN E; BINAURAL INTERACTION AND FUNCTIONAL OR-GANIZATION IN COCHLEAR NUCLEUS (BOSS618); 24 MONTHS \$32,200

# RHODE ISLAND

# BROWN UNIVERSITY

CSERR, HELEN F; THE PHYLOGENY AND ONTOGENY OF BRAIN-BAR-RIER MECHANISMS (BO28474 001); 16 MONTHS \$23,800

#### TENNESSEE

# UNIVERSITY OF TENNESSEE MED UNITS AT MEMPHIS

BARRETT, TERENCE W; EFFECT OF INTERAURAL ACOUSTICAL SIGNALS ON THE 'Q' VALUE OF CAT CORTICAL NEURONS (BOSOSSE): 12 MONTHS \$19.900

# VANDERBILT UNIVERSITY

MALANEY, GEORGE W; ROLE OF WATERBORNE MERCURY IN THE INCIDENCE OF MENTAL ILLNESS (8031861); 12 MONTHS \$9,500

#### TEXAS

#### RICE UNIVERSITY

GLANTZ, RAYMON M; CODING OF VISUAL INFORMATION BY THE CRAYFISH NERVOUS SYSTEM (BOJJS61); 24 MONTHS \$39,900

# UNIV OF TEXAS AT AUSTIN

BITTNER, GEORGE D: TROPHIC INTERACTIONS OF INVERTEBRATE NEURONS (BO30199); 24 MONTHS \$35,700

# UNIV OF TEXAS GRAD SCHOOL OF BIOMED SCIENCES

BENOLKEN, ROBERT M; ELECTRO-CHEMICAL INTERMEDIATES OF THE RETINA (BOJJUP): 24 MONTHS \$39,700



#### VERMONT

UNIVERSITY OF VERMONT

LAWSON, ROBERT B; HUMAN STEREOSCOPIC DEPTH AND CONTOUR PERCEPTION (BOSOSIE): 24 MONTHS \$27,500

#### VIRGINIA

WASHINGTON AND LEE UNIVERSITY

JARRARD, LEONARD E; THE HIPPOCAMPUS AND MOTIVATION (BOSOIS); 12 MONTHS \$20,000

UNIVERSITY OF YIRGINIA-SCHOOL OF MEDICINE

BENEVENTO, LOUIS A; ANATOMICAL ANALYSIS OF VISUAL SYSTEM (BOSSES X00): 12 MONTHS \$24,000

#### WASHINGTON

UNIVERSITY OF WASHINGTON

SACKETT, GENE P, AND BOWDEN, DOUGLAS M; THE EFFECTS OF ELECTRICAL BRAIN STIMULATION ON BEHAVIORAL DEVELOPMENT (BOJI14); 24 MONTHS \$40,000

WILLOWS, A O DENNIS, NEURONAL MECHANISMS OF STEREOTYPED BEHAVIOR (801)720 X00), 12 MONTHS \$35,000

#### WISCONSIN

UNIVERSITY OF WISCONSIN, MADISON

WASSERMAN, GERALD S; NEUROPHYSIOLOGIC AND BEHAVIORAL STUDIES OF VISION (BOOSSS) 003); \$4,700

HAILMAN, JACK P. BEHAVIORAL AND PHYSIOLOGICAL ASPECTS OF ANURAN PHOTOTAXIS AND COLOR VISION (BOSSES X01); 12 MONTHS \$26,800

DAVENPORT, JOHN W; THYROID FUNCTION AND INTELLIGENCE (BG)1919. 24 MONTHS \$45,000

UNIVERSITY OF WISCONSIN, MILWAUKEE

KHAVARI, KHALIL A; NEUROCHEMICAL SUBSTRATES OF REWARD AND PUNISHMENT (BOSSESS); 12 MONTHS \$21,000

# ASTRONOMY, MATHEMATICS, PHYSICS, AND CHEMISTRY

# **ASTRONOMY**

#### ARIZONA

LOWELL OBSERVATORY

FRANZ, OTTO G; PHOTOMETRY AND ASTROMETRY OF VISUAL DOUBLE STARS (P020090 001); 12 MONTHS \$23,000

GICLAS, HENRY L; PROPER MOTION SURVEY WITH THE 11-INCH PHOTOGRAPHIC TELESCOPE OF THE LOWELL OBSERVATORY (POSSES 001); 12 MONTHS \$28,600

UNIVERSITY OF ARIZONA

BOK, BART J; BLUE STARS AT LOW GALACTIC LATITUDES (POISSIS)

JOHNSON, HAROLD L: MICHELSON (FOURIER TRANSFORM) SPEC-TROSCOPY (POSEOST 001); 12 MONTHS \$43,500

GEHRELS, A M J TOM; PROJECT POLARISCOPE (PO28204 001\*); 12 MONTHS \$65,100

LOW, FRANK J, AND RIEKE, GEORGE H; INFRARED RADIATION FROM GALACTIC NUCLEI AND QUASI-STELLAR OBJECTS (POS1258); 12 MONTHS \$40,700

THOMPSON, RODGER I; ANALYSIS OF THE INFRARED SPECTRA OF LATE STARS (POSICOT); 12 MONTHS \$10,000

ROSENDHAL, JEFFREY D; SPECTROSCOPIC STUDIES OF HIGH-LU-MINOSITY STARS (POJIZIO): 12 MONTHS \$13,900

WEYMANN, R J, AND WILLIAMS, R E; SPECTROSCOPIC STUDIES OF QUASI-STELLAR OBJECTS AND SEYFERT GALAXY NUCLEI (PO31450); 12 MONTHS \$14,900

### CALIFORNIA

CALIFORNIA INSTITUTE OF TECHNOLOGY

SARGENT, W. L. W. AND SEARLE, L; SUPERNOVAE AND COMPACT GALAXIES (POS1884 001); 12 MONTHS \$42,800

THORNE, KIP S; RELATIVISTIC AND NUCLEAR ASTROPHYSICS (POSTSOL 901); 12 MONTHS \$166,000

STANLEY, GORDON 1; ASTRONOMY RESEARCH AT THE OWENS VAL-LEY RADIO OBSERVATORY (Pososoo X00); 12 MONTHS \$469,000

OKE, I B, AND GUNN, I E: COSMOLOGICAL STUDY OF VERY FAINT GALAXIES (POSISIS), 12 MONTHS \$43,700

# STANFORD UNIVERSITY

BRACEWELL, R. N; INVESTIGATIONS WITH THE STANFORD FIVE-AN-TENNA ARRAY (POSISSE): 12 MONTHS \$150,300 UNIVERSITY OF CALIFORNIA, BERKELEY

KING, IVAN B; STRUCTURE OF STELLAR SYSTEMS (POSIGEO 001); 18 MONTHS \$28,700

KUHI, LEONARD VI STARS WITH INFRARED EXCESSES (FOROSIP); 24 MONTHS \$48,900

WEAVER, HAROLD; RADIO ASTRONOMICAL STUDIES (POSO184 X00): 18 MONTHS \$310,000

GAUSTAD, JOHN E; INFRARED ASTRONOMY (POSISSE X00), 12 MONTHS \$86,000

UNIVERSITY OF CALIFORNIA, IRVINE

REINES, FREDERICK; CONFERENCE - SOLAR NEUTRINOS, STATUS AND PROSPECTS (POSSES); 6 MONTHS \$2,000

UNIVERSITY OF CALIFORNIA, LOS ANGELES

ALLER, LAWRENCE H; CHEMICAL COMPOSITIONS OF STARS AND GASEOUS NEBULAE (POSISON X00), 12 MONTHS \$19,000

LINGEL FELTER, RICHARD E; COSMIC RAY AND SOLAR PARTICLE STUDIES (POSICEO), 12 MONTHS \$11,800

POPPER, D M, AND PLAVEC, M; CLOSE BINARY STARS (POSSESS X00); 12 MONTHS \$55,600

UNIVEGRITY OF CALIFORNIA, SAN DIEGO

BURBIDGE, E MARGARET, AND STEIN, WAYNE A: THEORETICAL AND OBSERVATIONAL STUDIES IN STELLAR AND INTERSTELLAR AS-TROPHYSICS (POIOR & XXXX), 12 MONTHS \$83,700

RICKETT, BARNABY J, AND HANKINS, TIMOTHY H; STUDIES OF PUL-SAR RADIO SIGNALS AFTER REMOVING INTERSTELLAR DISPERSION (POISSES: 12 MONTHS 20200)

UNIVERSITY OF CALIFORNIA, SANTA CRUZ

WAMPLER, E J; DIGITAL IMAGE TUBE SYSTEMS FOR FAINT STAR SPECTROPHUTOMETRY (POSSESS OOI): 12 MONTHS \$104,000

FAULKNER, JOHN, AND BODENHEIMER, PETER H; STELLAR STRUCTURE AND EVOLUTION (Postsst Xoo); 12 MONTHS \$60,000

UNIVERSITY OF CALIFORNIA, SANTA CRUZ-LICK OBSERVATORY

VASILEVSKIS, S; STELLAR PROPER MOTIONS AND PARALLAXES (POSSSS 001); 12 MONTHS \$41,000

VASILEVSKIS, 8; ADDITION OF ON-LINE COMPUTER TO THE LICK OBSERVATORY AUTOMATIC MEASURING SYSTEM (PO12438); 12 MONTHS \$55,000

UNIVERSITY OF CALIFORNIA, SAN DIEGO-REVELLE COLLEGE

BURBIDGE, E MARGARET, AND BURBIDGE, GEOFFREY R; EXTERNAL GALAXIES AND QUASI-STELLAR OBJECTS (PORO280 001); 14 MONTHS \$60,000

# CANADA

UNIVERSITY OF TORONTO

MACRAE, D A; COLLOQUIUM ON VARIABLE STARS IN GLOBULAR CLUSTERS AND IN RELATED SYSTEMS (POLISIE); 12 MONTHS \$3,000

#### COLORADO

UNIVERSITY OF COLORADO

GARSTANG, ROY HENRY; ATOMIC OSCILLATOR STRENGTHS AND CROSS SECTIONS FOR ASTRONOMICAL APPLICATIONS (POROSPS 001); 12 MONTHS \$45,000

COX, JOHN P. AND HANSEN, CARL; STELLAR STRUCTURE AND EVOLUTION (POPO771 001): 12 MONTHS \$50,500

WARWICK, JAMES, AND DULK, GEORGE; RADIC-ASTRONOMY SIU-DIES (P028038 001); 12 MONTHS \$130,000

#### CONNECTICUT

WESLEYAN UNIVERSITY

UPGREN, ARTHUR R; PARALLAXES AND PROPER MOTIONS (POIST) 001); 12 MONTHS \$25,300

ROOD, HERBERT J. AND PAGE, THORNTON L; GALAXIES AND CLUSTERS OF GALAXIES (PO19020 001); 12 MONTHS \$60,700

HILL, HENRY A; MEASUREMENT OF THE GRAVITATIONAL DEFLECTION OF LIGHT AT THE SANTA CATALINA LABORATORY FOR EXPERIMENTAL RELATIVITY BY ASTROMETRY (SCLERA) (POS6507 001); 12 MONTHS \$50,800

YALE UNIVERSITY

CLEMENCE, GERALD M; ORBITAL MECHANICS (POSSES); 12 MONTHS \$35,000

NEWELL, E BARRY; ELECTRONOGRAPHIC PHOTOMETRY OF BLUE STARS IN THE GLOBULAR CLUSTER MIS (POSISSE X00); 12 MONTHS \$12 900

DEMARQUE, PIERRE; STELLAR EVOLUTION (POSSESS X00): 12 MONTHS 855,700

YALE-COLUMBIA SOUTHERN OBSERVATORY INC

CLEMENCE, Q M; POSITIONS OF SOUTHERN STARS BY REFERENCE TO GALAXIES (PON4685 001); 12 MONTHS \$52,500



# DISTRICT OF COLUMBIA

#### NATIONAL ACADEMY OF SCIENCES

KROPP, B L; ASTROMETRIC RESEARCH IN THE SOUTHERN HEMI-SPHERE (C#10007 01#); 12 MONTHS \$35,000

# NATIONAL ABRONAUTICS AND SPACE ADMINISTRATION

UNDERHILL, ANNE B; WORKING CONFERENCE ON STELLAR CHROMOSPHERES (AGONTA); 8 MONTHS \$3,200

# DEPARTMENT OF NAVY-OFFICE OF NAVAL RESEARCH

HAYES, R V: FLIGHT SUPPORT SERVICES FOR X-RAY ASTRONOMY BALLOON FLIGHTS FROM AUSTRALIA (AGOOTET 091); 12 MONTHS \$27,000

MARTIN, WALTER F; PURCHASE OF BALLOONS AND HELIUM IN SUPPORT OF COSMIC OAMMA RAY FLIGHTS IN AUSTRALIA BY GLEAN M. FYE, IA. CASE WESTERN RESERVE UNIVERSITY (AGOOMS); 12 MONTHS \$12,000

# FLORIDA

#### UNIVERSITY OF PLORIDA

SMITH, ALEX G: RADIO OBSERVATIONS OF JUPITER AND SATURN FROM CHILE (PO18999 001); 12 MONTHS \$16,900

SMITH, ALEX G; PLANETARY EMISSIONS AT RADIO FREQUENCIES (POSSISS 001): 12 MONTHS \$11,000

WOOD, FRANK BRAPSHAW; THE DISCOVERY AND STUDY OF VARIA-BLE STARS IN THE SOUTHERN HEMISPHERE (POSITIO X00); 12 MONTHS \$25,000

#### HAWAIL

#### UNIVERSITY OF HAWAII

JEFFERIES, JOHN T; THEORETICAL STUDIES IN FORMATION AND ANALYSIS OF SPECTRAL LINES (POSITEO XXX); 12 MONTHS \$45,700

#### BUNOIS

\*BAUTZ, LAURA P; OTHER PROGRAM AWARDS (OIAWDS); 15 MONTHS \$32.600

#### NORTHWESTERN UNIVERSITY

BAUTZ, LAURA P; STUDIES IN THE PHYSICAL CHARACTERISTICS OF GALAXIES (POPP) 17 00(1): 15 MONTHS \$6 cm

# UNIVERSITY OF CHICAGO

VAN ALTENA, W F; RESEARCH ON OPEN CLUSTERS AND STELLAR PARALLAXES AT THE YERKES OBSERVATORY (POISTI 001); 10 MONTHS \$32,300

MORGAN, WILLIAM W: MORPHOLOGICAL INVESTIGATIONS BASED ON SPECTRAL CLASSIFICATION (POINTON XUI); 12 MONTHS \$16,500

PALMER, PATRICK E; OBSERVATIONAL AND THEORETICAL STUDIES OF RADIO FREQUENCY SPECTRAL LINES FROM THE INTERSTELLAR MEDIUM (P024779 001); 12 MONTHS \$20,700

# UNIVERSITY OF ILLINOIS AT URBANA

SWENSON, G W JR; OPERATION OF THE VERMILION RIVER OBSERVATORY (PO20104 001); 12 MONTHS \$154,000

KALER, JAMES B; SPECTRA OF PLANETARY NEBULAE (PO22957 001); 21 MONTHS \$22,600

# LOUISIANA

# LOUISIANA STATE UNIVERSITY, BATON ROUGE

BOND, HOWARD E; METAL-DEFICIENT RED-GIANT STARS OF THE OALACTIC HALO (POJ1709); 12 MONTHS \$8,100

# LOUISIANA STATE UNIVERSITY, BATON ROUGE-AGRICULTURAL

EXPERIMENT STATION

LANDOLT, ARLO U; OBSERVATIONS OF ECLIPSING BINARY STAR HD \$5941 IN AN INTERNATIONAL COOPERATIVE PROGRAM (PGS1504); 6 MONTHS \$1,200

#### MARYLAND

# UNIVERSITY OF MARYLAND, COLLEGE PARK

ERICKSON, WILLIAM C; RADIO ASTRONOMICAL WORK AT THE CLARK LAKE RADIO OBSERVATORY (P019401 001); 12 MONTHS \$90,000

HARRINGTON, J PATRICK; LY-A RADIATION PRESSURE AND THE DYNAMICS OF YOUNG PLANETARY NEBULAE (PO19774 001); 12 MONTHS \$16,300

KERR, F J; INVESTIGATIONS OF GALACTIC STRUCTURE (P027503 001); 12 MONTHS \$69,100

BELL, ROGER A; SYNTHETIC SPECTROSCOPY OF STARS (POSO791); 12 MONTHS \$33,100

WESTERHOUT, GART; THE MARYLAND-GREEN BANK 21-CM LINE SURVEY (POJ2340); 7 MONTHS \$36,500

WENTZEL. DONAT G; INTERSTELLAR WINDS DRIVEN BY COSMIC RAYS (POJ4742); 12 MONTHS 45,100

#### MASSACHUSETTS

#### AMHERST COLLEGE

GREENSTEIN, GEORGE; SUPERFLUIDITY IN NEUTRON STARS (POSLIIO): \$4 MONTHS \$27.000

#### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

LEWIN, W H G; X-RAY ASTRONOMY BALLOON FLIGHTS (P019778 001); 12 MONTHS \$51,200

IBEN, ICKO JR; STELLAR PULSATION AND STELLAR EVOLUTION (POISTIT 001); 19 MONTHS \$39,200

HARRISON, GEORGE R; TECHNIQUES OF RULINO LARGE DIFFRAC-TION GRATINGS (PO2009) 001), 12 MONTHS \$33,300

BARRETT, ALAN H; RADIO ASTRONOMY OBSERVATIONS (PO#0769 001);
12 MONTHS \$15.300

BURKE, BERNARD F; RADIO ASTRONOMY (POSISES 601); 12 MONTHS

MORRISON, PHILIP; THEORETICAL ASTROPHYSICS AND COSMOLOGY (POSOMOLOGY XO): 18 MONTHS BORGO

BRIDGE, HERBERT S; EXPERIMENTAL ASTROPHYSICS (POSIST8); 12
MONTHS \$120,000

MCCORD, THOMAS B, AND WESTPHAL, JAMES A; TV-LIKE SYSTEM FOR DIRECT TELESCOPE IMAGE PHOTOMETRY (POSISIO); 12 MONTHS 846 500

# NORTHBAST RADIO OBSERVATORY CORPORATION

SEBRING, PAUL B; RADIO ASTRONOMY AT THE HAYSTACK OBSER-VATORY (POSSESS 001); 12 MONTHS \$810,700

SEBRING, PAUL B; RADIO ASTRONOMY AT THE HAYSTACK OBSER-VATORY (POSSES 008); 12 MONTHS \$149,000

#### UNIVERSITY OF MASSACHUSETTS, AMBREST

DENT, WILLIAM A; MEASUREMENTS OF THE TIME VARIABILITY OF RADIO SOURCES (P01480 001); 12 MONTHS \$15,000

1RVINE, WILLIAM M, AND VAN BLERKÓM, DAVID J; RADIATIVE TRANSFER IN ASTROPHYSICAL SITUATIONS (POSSYLE 001); 12 MONTHS \$16,100

YNGVESSON, K SIGFRID; MASER RECEIVERS FOR TWO TO THREE MILLIMETER WAVELENGTH (POSEIGE 601); 12 MONTHS \$56,500

HUGUENIN, G.R., AND TAYLOR, J.H.; METER-WAVE RADIO ASTRONO-MY PROGRAM (PO\$2414 X00); 12 MONTHS \$128,300

# HARVARD UNIVERSITY-OBSERVATORY

MAXWELL, ALAN, AND HARRIS, DANIEL E; INTERPLANETARY SCIN-TILLATION TECHNIQUES APPLIED TO OALACTIC AND EXTRAGALAC-TIC RADIO ASTRONOMY (POSIIS 001); 12 MONTHS \$37.600

LILLEY, A E; HARVARD RADIO ASTRONOMY RESEARCH PROGRAMS
(P019717 001); 12 MONTHS \$223,400

DALGARNO, A, AND LAYZER, D; THEORETICAL ATOMIC AND MOLECULAR PHYSICS (POSIERS); 12 MONTHS \$56,000

#### MICHIGAN

# UNIVERSITY OF MICHIGAN

MILLER, FREEMAN D; OPERATION OF THE UNIVERSITY OF MICHIGAN CURTIS MEMORIAL TELESCOPE AT CERRO TOLOLO, CHILE (P007459 XOJ); 12 MONTHS \$40,700

HADDOCK, FRED T; RADIO ASTRONOMY (Posisis cos); 12 MONTHS \$152,100

COWLEY, CHARLES R, AND COWLEY, ANNE P; TWO DIMENSIONAL CLASSIFICATION OF STARS SOUTH OF 020DEGREES IN THE HENRY DRAPER CATALOGUE (P013709 001); 12 MONTHS \$33,200

## MINNESOTA

# UNIVERSITY OF MINNESOTA

LUYTEN, WILLEM J; MOTIONS OF FAINT STARS (P023509 001); 13 MONTHS \$25,400

WOOLF, NEVILLE J, AND STEIN, WAYNE A; SIXTY INCH INFRARED TELESCOPE FACILITY (P087883 001); 12 MONTHS \$35,900

NEY, EDWARD P; INFRARED OBSERVING AT CERRO TOLOLO, 1972 (POSSIS); 12 MONTHS \$5,500

WOOLF, NEVILLE J, AND STEIN, WAYNE A; INFRARED ASTRONOMY (POSETTE): 12 MONTHS \$39,000

## NEW JERSEY

# PRINCETON UNIVERSITY

SCHWARZSCHILD, MARTIN, AND DANIELSON, ROBERT E; THEORETI-CAL ASTROPHYSICS (P023580 001); 12 MONTHS \$90,000

MORTON, DONALD C; DIGITAL TELEVISION SYSTEM FOR DISCRETE PHOTON DETECTION (POR1998 001); 12 MONTHS \$65,000

SMITH, WILLIAM HAYDEN; ATOMIC AND MOLECULAR ABSOLUTE TRANSITION PROBABILITIES (POSO217); 12 MONTHS \$60,000 SPITZER, LYMAN JR; OBSERVATIONAL ASTRONOMY PROGRAM

(POJOJI); 12 MONTHS \$33,800
BAHCALL, JOHN N; RESEARCH IN EXTRAGALACTIC ASTROPHYSICS

(POSESE); 12 MONTHS \$11,700
OSTRIKER, JEREMIAH P: THEORETICAL HIGH ENERGY ASTROPHYSICS (POSESES X00); 12 MONTHS \$43,800



## NEW MEXICO

NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY

COLGATE, STIRLING A, AND MOORE, ELLIOTT P; DIGITIZED A TRONOMY AND SUPERNOVA SEARCH (POSTER) 00D; 12 MONTHS \$80,000

UNIVERSITY OF NEW MEXICO

KING, DAVID S; STELLAR PULSATION THEORY (POSICIO): 12 MONTHS \$16,100

#### NEW YORK

#### COLUMBIA UNIVERSITY

PRENDERGAST, KEVIN H: DYNAMICS OF GALAXIES (POSTICS 001°); 12 MONTHS \$34,900

NORMAN. BAKER AND LUCY, LEON B; ABRODYNAMICAL

PHENOMENA IN STARS (POSOST), 12 MONTHS \$42,800
ANGEL, J R P. POLARIEATION STUDIES OF MAGNETIC WHITE DWARF STARS (POSISSE XOO): 12 MONTHS \$34,300

# CORNELL UNIVERSITY

BALPETER, E E: THEORETICAL STUDIES IN ASTROPHYSICS (PORMORE 001); 12 MONTHS \$160,000

#### DUDLEY OBSERVATORY

GREENBERG, J MAYO; INTERNATIONAL ASTRONOMICAL UNION SYMPOSIUM ON INTERSTELLAR GRAINS AND MOLECULES (POSS187): 12 MONTHS 43 AM

#### STATE UNIVERSITY AT STONY BROOK

STROW, STEPHEN E; STELLAR ATMOSPHERES (POLISET OOL): 12 MONTHS \$50,800

PETERSON, DEANE M; MASS LOSS IN EARLY-TYPE AND PRE-MAIN SEQUENCE STARS (POJORIA); 12 MONTHS \$13,900

BREGER, MICHEL; PRE-MAIN SEQUENCE AND PECULIAR STARS (P031027); 12 MONTHS \$12,300

SIMON, MICHAL, AND STROM, S E; HIGH RESOLUTION ASTRONOMI-CAL PHOTOGRAPHY BY SPECKLE INTERFEROMETRY (POSIESS): 12 MONTHS \$20,000

KNACKE, ROGER F; GROUND-BASED INFRARED PHOTOMETRY AND SPECTROSCOPY (POSI 423); 12 MONTHS \$38,300

SHARPLESS, S L, AND DUTHIE, J Q M; LUNAR OCCULTATIONS OF STARS (POSISOS): 12 MONTHS \$13,400

#### YESHIVA UNIVERSITY

TRURAN, JAMES W; RESEARCH IN NUCLEAR ASTROPHYSICS (Pososse); 24 MONTHS \$49,900

CAMERON, A G W; NUCLEOSYNTHESIS AND ASTROPHYSICS (POSIER! X00°1: 12 MONTHS \$35,000

# OHIO

## CASE WESTERN RESERVE UNIVERSITY

MCCUSREY, S W. AND BIDELMAN, W P; LOW-DISPERSION AS-TRONOMICAL SPECTROSCOPY AND GALACTIC STRUCTURE (POLITOS 001); 14 MONTHS \$135,300

FRYE, GLENN M JR; HIGH ENERGY GAMMA RADIATION AT ONE MIL-LIBAR (Postes ool); 18 MONTHS \$142,200

## ONIO STATE UNIVERSITY

KRAUS, JOHN D; RESEARCH IN RADIO ASTRONOMY (PO25774 001); 12 MONTHS \$245,500

KEENAN, PHILIP C: IMPROVEMENT IN SPECTRAL TYPES AND LU-MINOSITY CALIBRATION OF LATE-TYPE GIANTS AND SUPERGIANTS (P030949); 24 MONTHS \$15,400

WING, ROBERT F: SPECTROPHOTOMETRY OF LATE-TYPE STARS (Posiers X00); 12 MONTHS \$32,800

# OREGON

# UNIVERSITY OF OREGON - EUGENE

EBBIGHAUSEN, EDWIN G, AND DONNELLY, RUSSELL J; RESEARCH AT PINE MOUNTAIN OBSERVATORY (POISORI 001); 12 MONTHS \$45,400

#### **PENNSYLVANIA**

## SWARTHMORE COLLEGE

VAN DE KAMP, PETER; ASTROMETRIC STUDY OF NEARBY STARS (Polissi 001); 12 MONTHS \$95,900

#### TEXAS

HAYMES. ROBERT C; LOW ENERGY CELESTIAL GAMMA RADIATION (P025226 001): 12 MONTHS \$149,200

# UNIV OF TEXAS AT AUSTIN

GRIBOVAL, PAUL J, AND SMITH, HARLAN J; CONSTRUCTION OF A HIGH-RESOLUTION, HIGH-SENSITIVITY ELECTRONOGRAPHIC CAMERA (P044,34 001); 12 MONTHS \$138,200

DOUGLAS, JAMES N; CONTINUED PROGRAM OF EXTRAGALACTIC AND SOLAR SYSTEM RADIO ASTRONOMY (POSSESS 001); 12 MONTHS 199,900

ARNETT, W DAVID; STELLAR EVOLUTION AND NUCLEOSYNTHESIS (POSEOSI): 12 MONTHS \$19,900

EVANS, DAVID S; PHOTOELECTRIC MEASUREMENT OF LUNAR OC-CULATATIONS (POSEES XOO); 12 MONTHS \$40,000

LAMBERT, DAVID L; INFRARED STELLAR SPECTROSCOPY WITH A CONNES'-TYPE INTERFEROMETER (POSESSE XOO); 12 MONTHS \$44,700

#### UNIV OF TEXAS AT DALLAS

TINSLEY, BEATRICE W: THEORETICAL INVESTIGATION OF THE STELLAR AND GASEOUS CONTENTS OF GALAXIES AND THEIR EVOLU-TION (P030453 X00): 12 MONTHS \$15,200

BRIGHAM YOUNG UNIVERSITY

MCNAMARA, D H; PHOTOMETRIC AND SPECTROGRAPHIC IN-VESTIGATIONS OF STARS (POSICES); 12 MONTHS \$20,200

#### VIRGINIA

#### UNIVERSITY OF VIRGINIA

FREDRICK, LAURENCE W; PARALLAXES AND PROPER MOTIONS OF SELECTED STARS (P045090 001); 12 MONTHS \$40,000

SNYDER, LEWIS E; A THEORETICAL AND OBSERVATIONAL RADIO STUDY OF THE MOLECULAR COMPOSITION OF INTERSTELLAR CLOUDS (POS 4000); 12 MONTHS \$19,900

#### WASHINGTON

UNIVERSITY OF WASHINGTON

AND PETERS, PHILIP C; GENERAL BARDEEN, JAMES M, RELATIVISTIC ASTROPHYSICS (POISSET X00); 12 MONTHS \$41,600

UNIVERSITY OF WISCONSIN, MADISON

OSTERBROCK, DONALD E, STUDIES OF GASEOUS NEBULAE (POSO670 X00): 12 MONTHS \$49,100

MATHIS, JOHN 8; THEORETICAL STUDIES OF GASEOUS NEBULAE (PO\$1566 XOO): 10 MONTHS \$10,600

UNIVERSITY OF WISCONSIN, PARKSIDE

PYPER, DIANE M; SPECTROPHOTOMETRIC INVESTIGATIONS OF AP STARS (POJ1884), 24 MONTHS \$25,000

# MATHEMATICAL SCIENCES

# ARIZONA

UNIVERSITY OF ARIZONA

FIFE, PAUL C; SINGULAR PERTURBATIONS AND CONTINUUM MECHANICS WITH PHYSIOLOGICAL APPLICATIONS (POSOSS X00); 12 MONTHS \$16,500

RUND, H; MULTIPLE INTEGRAL VARIATIONAL PROBLEMS (POSSESSO); 2 MONTHS \$10,000

CLAY, JAMES R; ENDOMORPHISM NEAR-RINGS OF GROUP AND CO-GROUP OBJECTS OF A CATEGORY, NEAR-RINGS AND BALANCED IN-COMPLETE BLOCK DESIGNS (POSSSIS); 26 MONTHS \$14,100

GREENLEE, WILFRED M. AND LAETSCH, THEODORE; NONLINEAR EIGENVALUE PROBLEMS AND PERTURBATION THEORY (POSJ652); 12 MONTHS \$12,600

GROEMER, HELMUT; A (POJ1002); 12 MONTHS \$8,300 AFFINE INVARIANTS OF CONVEX SETS

#### ARKANSAS

UNIVERSITY OF ARKANSAS

SUMMERS, W H; WEIGHTED SPACES AND WEIGHTED APPROXIMA-TION (POSISTO); 12 MONTHS \$4,800

CALIFORNIA INSTITUTE OF TECHNOLOGY

TODD, JOHN; COMPUTATIONAL PROBLEMS IN ALGEBRA AND ANAL-YSIS (P023300 002); 12 MONTHS \$45,000

LUXEMBURG, W A J; ANALYSIS AND NONSTANDARD ANALYSIS (Possss 001): 12 MONTHS \$50,100

DIL VORTH, R P; MATHEMATICAL ALGEBRA (POSSES 001); 12 MONTHS \$33,800

LAGERSTROM, PACO A; PARTIAL DIFFERENTIAL EQUATIONS AND CONTINUUM MECHANICS (POIRIST X00); 12 MONTHS \$37,000

**CLAREMONT GRADUATE SCHOOL** 

JAMES, ROBERT C; GEOMETRY OF NORMED LINEAR SPACES (POSSES) 001); 24 MONTHS \$20,200

WILLIAMSON, ROBERT E; ALGEBRAIC SURGERY ON MANIFOLDS (P031992); 12 MONTHS \$6,500

# COLLEGE OF NOTRE DAME

BRENNER, J L; THEORY OF MATRICES (POJESET); 12 MONTHS \$11,800

# STANFORD UNIVERSITY

COHEN, PAUL 3; FUNCTIONAL ANALYSIS (POSSIIS 001); 12 MONTHS \$26,000



DELERUW, TAKEL; HARMONIC AND ABSTRACT ANALYSIS (POSSMO 001), 12 MONTHS \$80,000

KARLIN, BAMUEL, AND MCGREGOR, JAMES; PROBABILITY THECRY AND APPLICATIONS IN ANALYSIS (POSSITE 00); 12 MONTHS \$21,900 FEFERMAN, SOLOMON; MATHEMATICAL LOGIC AND THE FOUNDA-

TIONS OF MATHEMATICS (POSSESS 001); \$6,900

SAMBLSON, HANS, AND MILGRAM, R JAMES; ALGEBRA AND TOPOLO-GY (Posses 001): 12 MONTHS \$20,000

MOSES, LINCOLN E; AN INTERNATIONAL SYMPOSIUM ON STATISTI-CAL PROBLEMS OF POPULATION RESEARCH, EAST-WEST CENTER, HONOLULU, HAWAII, AUGUST, 1871 (PONOS78); 12 MONTHS \$6,000

MOSES, LINCOLN E. AND STEIN, CHARLES M: STATISTICAL THEORY

AND METHODOLOGY (POS): 12 MONTHS \$72,800

IGLEHART, DONALD L; APPLIED PROBABILITY (POSISES X00); 12 MONTHS \$18,400

DANTZIG, GEORGE'B, AND COTTLE, RICHARD W; OPTIMIZATION THEORY (POSISES X00); 18 MONTHS \$31,700
OLKIN, INGRAM; MULTI-DIMENSIONAL STATISTICAL ANALYSIS

(Posses X00): 12 MONTHS \$48,600

OSSERMAN, ROBERT; DIFFERENTIAL GEOMETRY AND ASSOCIATED PARTIAL DIFFERENTIAL EQUATIONS (POSSESS XX0); 12 MONTHS \$16,900 BENNETT, BRUCE; ALGEBRAIC GEOMETRY (POSSES); 12 MONTHS

Ornstein, donald 8; probability and ergodic theory (posses X00); 12 MONTHS \$29,000

BERGMAN, STEPAN; THEORY OF ANALYTIC FUNCTIONS (POSSTES); 12 MONTHS \$11,000

ROYDEN, HALSEY L; COMPLEX AND ABSTRACT ANALYSIS (POSSELE X00); 18 MONTHS \$30,500

FEFERMAN, SOLOMON; MATHEMATICAL LOGIC AND THE FOUNDA-TIONS OF MATHEMATICS (POSTORI XOO); 12 MONTHS \$34,000

BAVES, B CURTIS; COMPUTATION OF FIXED POINTS (POSIESS); 12 MONTHS \$9.500

# UNIVERSITY OF CALIFORNIA, BERKELRY

BNALE, STEPHEN; GLOBAL ANALYSIS (POI4519 001); 1 MONTHS \$12,800 SMALE, STEPHEN; CLOBAL ANALYSIS AND APPLICATIONS (POILSIS 008): 18 MONTHS \$75,200

TELDMAN, JACOB; SOME TOPICS IN FUNCTIONAL ANALYSIS, PROBA-BILITY THEORY AND MATHEMATICAL PHYSICS (POISTSS 001); 12 MONTHS \$22,700

KOBAYASHI, SHOSHICHI, AND WOLF, JOSEPH A; LIE GROUPS AND DIFFERENTIAL GEOMETRY (POICES) 001); 12 MONTHS \$59,500

MORREY, CHARLES B JR. AND LEWY, HANS; ANALYSIS, PARTIAL DIFFERENTIAL EQUATIONS (PORCOS) 001); \$6,000

BATAKE, ICHIRO; ALGEBRAIC GROUPS AND ABELIAN VARIETIES (POSOLES 001); 12 MONTHS \$15,100

SEIDLNBERG, ABRAHAM, AND ROSENLICHT, MAXWELL A; ALGEBRA AND ALGEBRAIC GEOMETRY (POROSSA 008): 12 MONTHS \$62,100

LEITMANN, G; A DIFFERENTIAL GAME MODEL OF COLLECTIVE BARGAINING (POSISOS 001); 12 MONTHS \$19,800

PROTTER, M. H.; PARTIAL DIFFERENTIAL EQUATIONS (POSSOOS 001); 12 MONTHS \$10,200

KATO, TOSIO; PARTIAL DIFFERENTIAL EQUATIONS AND OPERATOR THEORY (Possies Xoi); 12 MONTHS \$30,000

CHERN, SHIINO-SHEN; DIFFERENTIAL GEOMETRY (POSSAS DOI); 6 MONTHS \$22,400

TARSKI, ALFRED, AND HENKIN, I.EON; WETAMATHEMATICS (PORFITED 001): \$31,100

EELLEY, JOHN L, AND MOORE, CALVIN C; FUNCTIONAL ANALYSIS (P0J0798 X00); 12 MONTHS \$109,500

GAUR, DAVID, AND SHEPHARD, RONALD W; MATHEMATICAL STU-DIES IN OPERATIONS RESEARCH (POSON); 12 MONTHS \$43,200

LECAM, LUCIEN M; PROBABILITY AND STATISTICS (POSICE; X00); 12 MONTHS \$10,000

TAUB, A H; ANALYTIC AND NUMERICAL STUDIES IN GENERAL RELATIVITY (POSISSE XOO\*); 12 MONTHS \$14,350
BRILLINGER, DAVID R; EMPIRICAL SPECTRAL ANALYSIS OF

PROCESSES WITH STATIONARY INCREMENTS (POSISSI): 24 MONTHS

RHODES, JOHN L; APPLIED AND PURE ALGEBRA (POSSSIS); 12 MONTHS \$6,800

DORSUM, KIELL A; NON-PARAMETRIC AND ISOTONIC INFERENCE, DECISION THEORY (POSSEST X00); 12 MONTHS \$13,700

JENSEN, RONALD B. AND SOLOVAY, ROBERT M: SET THEORY (Possess); 12 MONTHS \$18,000

MIRBY, ROBION C; ALGEBRAIC & DIFFERENTIAL TOPOLOGY (POSSOOS): 18 MONTHS \$9,000

THOMAS, PEMERY; TOPULOGY (POSISIT X00); 12 MONTHS \$34,000

CHERN, SHIINO-SHEN; DIFFERENTIAL GEOMETRY (POJ4785 X00); 12 MONTHS \$56,000

# UNIVERSITY OF CALIFORNIA, IRVINE

MCCARTY, GEORGE S; FOUNDATIONS OF DIFFERENTIAL GEOMETRY AND DIFFERENTIAL TOPOLOGY (POSSTEI OOI); 12 MONTHS \$14,000

RUSSO, BERNARD; FUNCTIONAL ANALYSIS (POSO222); 12 MONTHS \$11,600

WHITLEY, ROBERT J; BOUNDED LINEAR OPERATORS (POSICOS); 18 MONTHS \$6,400

KARAMARDIAN, STEPAN; NONLINEAR AND GENERALIZED COMPLE-MENTARITY PROBLEMS. THEORY AND SOLUTION TECHNIQUES (POSLEIF); 12 MONTHS \$12,000

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OEOFFRION, ARTHUR M; OPTIMIZATION OF LARGE SCALE SYSTEMS (Posessi 001\*); 12 MONTHS \$40,000

O'NEILL, BARRETT; DIFFERENTIAL GEOMETRY (PORISIG 001); 12 MONTHS \$28,000

CHANO, C C, AND MOSCHOVAKIS, Y N; FOUNDATIONS OF MATHE-MATICS (POSTOS) 001); 12 MONTHS \$26,500 SANCHEZ, DAVID A: DIFFERENTIAL EQUATIONS AND APPLIED

MATHEMATICS (PO27973 001); 12 MONTHS \$18,600

STRAUS, ERNST O; ALGEBRA (GROUP THEORY, DIVISION ALGEBRAS, UNIVERSAL ALGEBRAS, NUMBER THEORY AND COMBINATORICS (P028699 001); \$8,100

STRAUS, ERNST G; ALGEBRA (GROUP THEORY, DIVISION ALGEBRAS, UNIVERSAL ALGEBRAS), NUMBER THEORY AND COMBINATORICS (POSSESS 008); 12 MCNTHS \$26,600

BECKENBACH, E F; ANALYSIS AND GEOMETRY (POSSOTI 001): \$11,700 CURTIS, P C JR, AND BADE, WILLIAM O: CONTINUITY PROBLEMS FOR MAPPINGS OF BANACH ALGEBRAS (POSSOIS 001): 12 MONTHS \$24,900 BROWN, ROBERT F; RESEARCH IN ALGEBRAIC TOPOLOGY (POSMAS) 001): 12 MONTHS \$6,200

BALAKRISHNAN, A V: COLLOQUIUM ON OPTIMIZATION TECHNIQUES (POSICOS); 18 MONTHS \$6,400

STONE, CHARLES J; INFINITE PARTICLE SYSTEMS, POTENTIAL THEORY, ROBUST ESTIMATION, AND NONPARAMETRIC STATISTICS (POJJ 41 X00); 12 MONTHS \$90,100

CANTOR, DAVID, AND GORDON, BASIL; COMBINATORICS, ALGEBRA AND NUMBER THEORY (POSSSSO XOO): 12 MONTHS \$37,000

GAMELIN, THEODORE; FUNCTIONAL ANALYSIS AND BANACH AL-GEBRA THEORY (POSSESS X00); 12 MONTHS \$36,000

ARENS, RICHARD F; FUNCTIONAL ANALYSIS AND APPLICATIONS (Possess X00); 12 MONTHS \$58,500

EDWARDS, ROBERT D: GEOMETRY AND TOPOLOGY OF MANIFOLDS (POSALIST): 12 MONTHS \$5,200

CURTIS, PHILIP C; MATHEMATICAL LOGIC (POJ4711): 18 MONTHS \$5,700

# University of California, riverside

BLOCK, RICHARD E; LIE ALGEBRAS AND RELATED TOPICS (POSSES) 001); 12 MONTHS \$17,700

STRALKA, ALBERT R; EXTENDING CONGRUENCES ON COMPACT SEMIGROUPS (POSSER): 12 MONTHS \$5,000

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ROSENBLATT, MURRAY, AND EVANS, JOHN; MATHEMATICAL MODELS IN BIOLOGY (POSOS64 001); 12 MONTHS \$11,900

FRANKEL, THEODORE; COMPLEX MANIFOLDS, TOPOLOGY AND GEOMSTRY OF MANIFOLDS (PORTATO 001); 12 MONTHS \$8,600

SMALL, LANCE, AND PATTERSON, RICHARD; RING THEORY AND AL-GEBRAIC TOPOLOGY (PO20375 COI); 12 MONTHS \$12,000

OETOOR, RONALD, AND SHARPE, MICHAEL J; MARKOV PROCESSES AND RELATED TOPICS (POJOTAT); 24 MONTHS \$41,200

SMALL, LANCE; NON COMMUTATIVE RING THEORY (POSISES); 12 MONTHS \$10,100 WARSCHAWSKI, STEFAN E; UNIVALENT FUNCTIONS AND CONFOR-

HAL MAPPING (POSSISS); 12 MONTHS \$21,600 ANDERSON, DONALD; ALGEBRAIC TOPOLOGY AND ALGEBRAIC K

THEORY (POSILISS); 12 MONTHS \$24,800

# University of California, Santa Barbara

BRUCKNER, ANDREW M; THEORY OF DIFFERENTIATION (POISOS 002); 12 MONTHS \$1,300

AKEMANN, CHARLES A; C\*-ALGEBRAS AS THE FOUNDATION OF QUANTUM MECHANICS (POIDIOI 002); 12 MONTHS \$4,900

FAN, KY; FUNCTIONAL ANALYSIS (TOPOLOGICAL VECTOR SPACES) (Pososse 008): 12 MONTHS \$18,900

ERNEST, JOHN A; OPERATOR THEORY WITHIN A VON NEUMANN AL-GEBRA (PO\$1196 001); 12 MONTHS \$7,300

BACHMUTH, SEYMOUR, AND MOCHIZUKI, HORACE Y; RESTRICTED BURNSIDE PROBLEM (POSPOSO XOI); 12 MONTHS \$12,500

GERSTEIN, LARRY J. MINIMA AND CLASS NUMBERS OF QUADRATIC FORMS OVER GLOBAL FIELDS (POSSOLI); 12 MONTHS \$6,500

ZELNANOWITZ, JULIUS M: ENDOMORPHISM RINGS OF FINITE-DIMENSIONAL MODULES (POSMOR); 12 MONTHS \$5,500 BERENS, HUBERT; NON-COMMUTING APPROXIMATION PROCESSES

ON BANACH SPACES (POSISIT); 12 MONTHS \$6,700 BOEHNE, THOMAS K; CONVOLUTION INTEGRALS (POSISSE); 12

# University of California, Banta Cruz

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MAHOWALD, MARK, AND BARRATT, MICHAEL: ALGEBRAIC TOPOLO-OY (POSSSS 001): 12 MONTHS \$18,800

BACKS, JEROME; PROBABILITY AND STATISTICS (POSSES 001): 12 MONTHS 817,000

EVENS, LEONARD, MATLIS, EBEN, ZELINSKY, DANIEL, AND MOUNT, KENNETH: ALGERRA AND ALGEBRAIC GEOMETRY (POSSES 001): 12 MONTHS \$74.500

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BOAS, R P; REAL AND COMPLEX ANALYSIS (POSSIS); 12 MONTHS

\$42,000

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BAILY, WALTER L JR; ALGEBRAIC PROBLEMS IN AUTOMORPHIC FORMS AND PROPERTIES OF FAMILIES OF HOLOMORPHIC FUNC-TIONS (POISSO 002); 18 MONTHS \$20,600

LEBOVITZ, NORMAN R; STRUCTURE AND STABILITY OF ROTATING

FLUID MASSES (POSSSS OCI); 24 MONTHS \$34,500

BROWDER, FELIX E: PARTIAL DIFFERENTIAL EQUATIONS AND NONLINEAR FUNCTIONAL ANALYSIS (POSSI 48 001); 12 MONTHS \$50,000 ZYGMUND, ANTONI; MATHEMATICAL ANALYSIS (PORSETI 001); 12 MONTHS \$55 non

KAPLANSKY, IRVING; GROUPS, RINGS, AND HOMOLOGICAL ALGEBRA (P014700 001); 18 MONTHS \$60,000

LASHOF, RICHARD K; DIFFERENTIAL TOPOLOGY, COBORDISM. HOMOTOPY THEORY AND ALGERRAIC K-THEORY (POSSOTS 001); \$12,600 LASHOF, RICHARD K; GEOMETRIC TOPOLOGY, ALGEBRAIC TOPOLO-

GY AND ALGEBRAIC K-THEORY (POSPOTS 002); 12 MONTHS \$44,000 HERSTEIN, 1 N; RING THEORY (POSPSES 001); 12 MONTHS \$6,000 ALBERT, A A; LINEAR ALGEBRA (POJOSUS): 12 MONTHS \$12,000

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MEIER, PAUL, AND KRUSKAL, WILLIAM H; MATHEMATICAL STATISTICS AND PROBABILITY (POSEOST X00); 12 MONTHS \$85,200

REID, WILLIAM H; APPLIED MATHEMATICS (POSSISI X00); 18 MONTHS \$17,300

ALPERIN, JONATHAN L: SYMPOSIUM ON FINITE GROUPS (POSISES), 12 MONTHS \$14,600

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SOARE, ROBERT 1, AND HAY, LOUISE; RECURSIVE FUNCTION THEORY (P019958 001); 12 MONTHS \$5,800

BLACKBURN, NORMAN: NILPOTENT AND FINITE GROUPS (PORELEO 001), 9 MONTHS \$17,400

BLACKBURN, NORMAN, AND ITO, NOBORU; ALGEBRA (POSSISO GOS): 12 MONTHS \$68,500

GUGENHEIM, VICTOR K A M; TOPOLOGY AND GEOMETRY (PO284)? 001): 12 MONTHS \$36,900

HARRIS, MORTON E; CLASSIFICATION OF SIMPLE GROUPS (POJOSII); 12 MONTHS \$10 400

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16.400

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BARTLE, ROBERT G; FUNCTIONAL ANALYSIS (POSS577 001); 12 MONTHS \$60,000

BATEMAN, PAUL T, AND REINER, IRVING; ALGEBRA AND NUMBER THEORY (Possess 001), 12 MONTHS \$54,000

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CHEN, KUO-TSAI; ITERATED INTEGRATION OF DIFFERENTIAL FORMS (POSUST); 12 MONTHS \$10,100

OSBORN, HOWARD; DIFFERENTIAL GEOMETRY IN PIECEWISE LINEAR TOPOLOGY (POSISEI); 12 MONTHS \$10,100

BISHOP, R L, AND GOLDBERG, B J; DIFFERENTIAL GEOMETRY (POI4441); 18 HONTHS \$7,500

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MCCARTHY, DONALD J; GROUPS WITH INFINITE CONJUGACY CLASSES (POJ1743); 12 MONTHS \$5,600

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CHILDS, LINDSAY N; MATHEMATICAL ALGEBRA (POSPESS X01); 12 MONTHS \$6,000

THOMAS, EDWARD S; INVARIANT SETS OF FLOWS ON MANIFOLDS (POSSOSS); 12 MONTHS \$7,500

MORRIS, ROBERT A; COHOMOLOGY OF INSEPARABLE EXTENSIONS (POJ400J); 18 MONTHS \$5,400

NIRENBERG, RICARDO; ON THE INDUCED OPERATOR ON REAL SUB-MANIFOLDS OF CN (POJUSS); 12 MONTHS \$9,000

RUPP, RUSSELL D; PENALTY AND MULTIPLIER METHODS (POSISSO); 12 MONTHS \$5,300

BENTON; THEORY OF RECIPROCAL AND MARKOV JAMISON. PROCESSES (POSISEY), 12 MONTHS \$10,000

# STATE UNIVERSITY AT BUFFALO

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PARZEN, EMANUEL; PROBABILITY DENSITY ESTIMATION THEORY AND ALGORITHMS (PORPOSE 001); 12 MONTHS \$21,500

PARZEN, EMANUEL; REGIONAL CONFERENCE ON TESTS PASED ON THE SAMPLE DISTRIBUTION FUNCTION (POSORES); 12 MONTHS \$10,400 CHOU, CHING; ALGEBRAIC THEORY FOR AMENABLE GROUPS AND RELATED ANALYTIC PROBLEMS (POSLIDO); 12 MONTHS \$8,500

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DOUGLAS, RONALD G, AND PINCUS, JOEL D; PURE AND APPLIED OPERATOR THEORY AND GROUP REPRESENTATIONS (POSSETS 001): 12 MONTHS \$89,500

CHARLAP, LEONARD S; TOPOLOGY OF MANIFOLDS (POSSIS) 001); 12 MONTHS \$60,000

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SIMONS, JAMES; RIEMANNIAN GEOMETRY (PO20145 001); \$14,000

SIMONS, JAMES; DIFFERENTIAL GEOMETRY (PO29743 002); 12 MONTHS \$60,000

SRIVASTAV, RAM P. MIXED BOUNDARY VALUE PROBLEMS IN ELASTICITY (POJ1375): 12 MONTHS 19:200
ZEMANIAN, A H; CONTINUOUS AND COMBINATORIAL SYSTEMS

THEORY (POSISSE X00), 12 MONTHS \$30,500

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TO TOPOLOGY (P029540 001); 12 MONTHS \$6,500 HENRY, BRUCE R; DIFFERENCE EQUATIONS IN BIOLOGY (POSISTS); 24 MONTHS \$11,600

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KEMPERMAN, J H B; PROBABILITY AND ANALYSIS (POSP471 001); 12 MONTHS \$12,800

MARSHALL, A W; MULTIVARIATE LIFE DISTRIBUTIONS AND IN-EQUALITIES (POSO707 X00): 12 MONTHS \$15,300

#### YESHIVA UNIVERSITY

SCHECHTER, MARTIN; MATHEMATICAL THEORY OF LINEAR OPERA-TORS PERTAINING TO QUANTUM MECHANICAL SYSTEMS OF PARTI-CLES (PO10737 001); 12 MONTHS \$14,500

SCHECHTER, MARTIN; DIFFERENTIAL EQUATIONS WITH SINGULARITIES AND SOME OF THEIR IMPORTANT APPLICATIONS (POISTS) 008); 12 MONTHS \$12,000

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FLATTO, LEOPOLD; PROBLEMS ON RANDOM WALKS (POSSETS); 12 MONTHS \$8,300

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BRYLAWSKI, THOMAS H; MODULAR FLATS AND THE CRITICAL PROBLEM FOR COMBINATORIAL GEOMETRIES (POSESSE): 12 MONTHS 84 000

KELLY, DOUGLAS G; REPRESENTATION OF COMBINATORIAL GEOMETRIES BY ELEMENTARY MAPS (POLIOSI); 12 MONTHS \$5,500 PETERSEN, KARL; CONSTRUCTION AND PROPERTIES OF INDUCED FLOWS (POLIUS); 12 MONTHS \$5,200

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NOLL, WALTER; MATHEMATICAL FOUNDATIONS OF MECHANICS

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GOLDSTEIN, A A; NUMERICAL ANALYSIS (POJ4J17); 12 MONTHS \$9,300 WASHINGTON STATE UNIVERSITY

OSTRON, T G, AND KALLAHER, M J; TRANSLATION PLANES (POSSOVE X00); 12 MONTHS \$13,100

BUSHAW, DONALD W; CONFERENCE ON MATHEMATICAL TOPICS IN STABILITY THEORY (POSSIDS): 6 MONTHS \$2,000

# UNIVERSITY OF WISCONSIN, MADISON

SCHNEIDER, HANS; MATRIX AND COMBINATORIAL THEORY (POITEIS 008); 12 MONTHS \$15,400

HELLERSTEIN, SINON; FUNCTION THEORY AND RELATED ASYMP. TOTIC PROBLEMS (POSISSO 001), 12 MONTHS \$10,000

BUCK, R C; MATHEMATICAL ANALYSIS (POZZISZ 001); 12 MONTHS \$75,000

YOUNG, LAURENCE C; STOCHASTIC INTEGRALS, CONTROL THEORY, VARIATIONAL METHODS, AND THEIR APPLICATIONS (POSITIO 101); 12 MONTHS \$11 000

NEY, PETER E; BRANCHING PROCESSES AND POPULATION GROWTH AND MOVEMENT (PORTERS 001); 6 MONTHS \$15,600

KEISLER, H JERONE; MATHEMATICAL LOGIC AND FOUNDATIONS (Postess 001); 12 MONTHS \$32,000

BRAUER, FRED; GLOBAL AND ASYMPTOTIC PROBLEMS IN DIF. FERENTIAL EQUATIONS (POSSEST 001); 12 MONTHS \$22,800

OSBORN, J MARSHALL; NONASSOCIATIVE ALGEBRAS (POID 404 XOI): 12 MONTHS \$8,000

SOLOMON, LOUIS; GROUPS AND GEOMETRY (POSESSE 001); \$15,500 MARTIN, JOSEPH M. AND MCMILLAN, DR JR; GEOMETRIC TOPOLOGY

(P049337 X01); 12 MONTHS \$24,800 FADELL, EDWARD R, AND HUSSEINI, SUFIAN Y: ALGEBRAIC

TOPOLOGY AND MANIFOLD THEORY (POSSUS 001); \$13,000

FADELL, EDWARD R: ALGEBRAIC TOPOLOGY AND MANIFOLD THEORY (POSSAS 003); 12 MONTHS \$18,900

NOHEL, JOHN A; NONLINEAR VOLTERRA AND DELAY EQUATIONS (Pososso): 12 Months \$9,600

VAN RYZIN, JOHN; REPETITIVE STATISTICAL DECISION PROBLEMS (Polini); 24 Months \$18,800

SOLOMON, LOUIS; GROUPS AND GEOMETRY (POSSESS X00): 18 MONTHS \$21,300

RABINOWITZ, PAUL H. AND TURNER, ROBERT E L; SOME QUESTIONS IN NONLINEAR PARTIAL DIFFERENTIAL EQUATIONS AND NONLINEAR FUCTIONAL ANALYSIS (POSESSE); 12 MONTHS \$18,800 BLEICHER, M N; STUDIES IN ANALYTIC NUMBER THEORY AND

GLOMETRY OF NUMBERS (POSSOSS); 12 MONTHS \$7,400 LEVY, LAWRENCE S, AND WIEGAND, ROGER A; RINGS AND

MODULES (POSSSIE): 12 MONTHS \$11.630 MEYER, R E; ASYMPTOTIC METHODS FOR PARTIAL DIFFERENTIAL

EQUATIONS AND APPLICATIONS (POSSES X00); 12 HONTHS \$30,100 BUCK, R C; MATHEMATICAL ANALYSIS (Posses X00); 12 MONTHS \$101,300

NEY, PETER E; BRANCHING PROCESSES AND POPULATION GROWTH AND MOVEMENT (POSSESS X00); 12 HONTHS \$32,400

GREVILLE, T N E; SYMPOSIUM ON POPULATION DYNAMICS (POLISOI): 12 MONTHS \$7000

# PHYSICS

#### ARIZONA

# UNIVERSITY OF ARIZONA

BOWEN, THEODORE; ELEMENTARY PARTICLE RESEARCH WITH COUNTERS AND TRACK CHAMBERS (POSSIOG OOI); 12 MONTHS \$153,100 DONAHUE, DOUGLAS J; LOW ENERGY NUCLEAR PHYSICS (POSSOS); 12 MONTHS \$90,000

# CALIFORNIA

# CALIFORNIA INSTITUTE OF TECHNOLOGY

CORNGOLD, NOEL; THE THEORY OF NEUTRAL PARTICLE TRANS-PORT (P009626 001); 24 MONTHS \$62,000

LAURITSEN, T; NUCLEAR ASTROPHYSICS AND ASSOCIATED NUCLEAR PHYSICS (PO28027 001); 12 MONTHS \$1,000,000

### HARVEY MUDD COLLEGE

BELL, GRAYDON D; ABSOLUTE F-VALUES FOR SPECTRAL LINES OF HEAVY ELEMENTS (POOST 45 001); 12 MONTHS \$17,000

# STANFORD RESEARCH INSTITUTE

SMITH, FELIX T; COLLISION PROCESSES INVOLVING METASTABLE ATOMS AND MOLECULES (PORISIA 001), 12 MONTHS \$26,000

HILL, ROBERT M; DYNAMIC MOLECULAR DEFLECTION (POJ4660); 12 MONTHS \$51,400

## STANFORD UNIVERSITY

MEYERHOF, WALTER E, AND HANNA, STANLEY S; NUCLEAR STRUC-TURE INVESTIGATIONS WITH A 15-MEY TANDEM VAN DE GRAAFF AC-CELERATOR (POOSISS 003); 12 MONTHS \$460,000

MEYERHOF, WALTER E, AND HANNA, STANLEY S; NUCLEAR STRUC-TURE INVESTIGATIONS WITH A 15-MEY TANDEM VAN DE GRAAFF AC. CELERATOR (P008161 006); \$4,900

FAIRBANK, W M. HOPSTADTER, ROBERT, SCHWARTZ, MELVIN, SCHWETTMAN, H A. AND WOJCICKI, STANLEY: HIGH ENERGY PHYSICS, CRYOGENIC RESEARCH, AND GRAVITATIONAL RADIATION

(Possess 001\*); 12 MONTHS \$1,319,000 SCHAWLOW, ARTHUR L; STUDIES IN SPECTROSCOPY AND QUAN-

TUM ELECTRONICS (Possais 001); \$18,000

SCHAWLOW, ARTHUR; SPECTROSCOPY AND QUANTUM ELEC-TRONICS (POSSIS 002); 12 MONTHS \$160,000

CRAWFORD, F W; TURBULENT HEATING OF PLASMAS (POSSESS); 12 MONTHS \$65,000

GLAVISH, HILTON F, HANNA, STANLEY S, AND SCHWETTMAN, H ALAN; SUPERCONDUCTING HEAVY ION ACCELERATOR (POSISIS); 6 MONTHS \$73,500

# UNIVERSITY OF CALIFORNIA, BERKELEY

DAVIS, SUMNER P: OBSERVATION AND ANALYSIS OF SPECTRA AND STRUCTURE OF ATOMS AND MOLECULES (POISSOS 001); 24 MONTHS \$48,300

SACHS, RAINER K; GENERAL RELATIVITY (P029257 001); 12 MONTHS



JEFFRIES, C D; THE SECOND INTERNATIONAL CONFERENCE ON POLARIZED TARGETS, LAWRENCE RADIATION LABORATORY, BERKELEY, CALIFORNIA, AUGUST AND SEPTEMBER, 1971 (POSOID); 12 MONTHS \$8,500

TAUB, A H; ANALYTIC AND NUMBRICAL STUDIES IN GENERAL RELATIVITY (POSISS X00°); 12 MONTHS \$14,350

#### UNIVERSITY OF CALIFORNIA, DAVIS

GREIDER, KENNETH, AND TRUE, WILLIAM W; THEORETICAL PHYSICS (POSSOIS); 12 MONTHS \$60,800

JUNGERMAN, J A; NUCLEAR PHYSICS RESEARCH (POSIOSI); 18 MONTHS \$294,500

#### UNIVERSITY OF CALIFORNIA, IRVINE

SHAW, GORDON L, AND BANDER, MYRON; THEORETICAL STUDIES IN HIGH ENERGY PHYSICS (P017170 001); 18 MONTHS \$48,500

RYNN, NATHAN; ALKALI METAL, BARIUM PLASMAS, AND BASIC PLASMA PHYSICS (POSSESS 001); 12 MONTHS \$114,400

SHAW, GORDON L; CONFERENCE ON PARTICLE PHYSICS, UNIVERSITY OF CALIFORNIA, IRVINE, DECEMBER 1971 (POSI683); 12 MONTHS \$1,000

REINES, FREDERICK, AND CHEN, HERBERT HWA-SEN; ELASTIC SCATTERING AT LAMPF - A FEASIBILITY STUDY (POSSISS), 12 MONTHS \$99.900

# University of California, los angeles

NORTON, RICHARD; THEORETICAL HIGH ENERGY PHYSICS (PORIRRI 008); 12 MONTHS \$143,000

MOSZKOWSKI, STEVEN A; THEORETICAL NUCLEAR PHYSICS (PORISIS 001); 12 MONTHS \$40,000

FRIED, BURTON D; PLASMA PHYSICS (POSSSIT 001); 12 MONTHS \$24,000 WONG, ALFRED Y; NON-LINEAR EFFECTS IN ELECTRON PLASMA WAVES (POSSSOS X01); 12 MONTHS \$54,100

WRIGHT, BYRON T; INTERNATIONAL CONFERENCE ON FEW-PARTI-CLE PROBLEMS IN THE NUCLEAR INTERACTION (POSSIFE); 12 MONTHS 49,700

SCHLEIN, PETER E; MULTI-PARTICLE SPECTROSCOPY EXPERI-MENTS (POSSIGS); 12 MONTHS \$94,400

# UNIVERSITY OF CALIFORNIA, RIVERSIDE

KAUS, PETER E; HIGH ENERGY THEORETICAL PHYSICS (POSSSES X00): 18 MONTHS \$30,000

# UNIVERSITY OF CALIFORNIA, SAN DIEGO

CHEN, JOSEPH C Y; THEORETICAL RESEARCH ON SEVERAL PARTI-CLE DYNAMICS (POROUS 001); 12 MONTHS \$32,500

MALMBERG, JOHN H; NONLINEAR PLASMA WAVE RESEARCH (POSTISO 001); 12 MONTHS \$125,000

VERNON, WAYNE: MUON INELAST'C SCATTERING AT THE NA-TIONAL ACCELERATOR LABORATORY (POSIOIS); 12 MONTHS \$22,400

BRUECKNER, KEITH A; MANY-BODY THEORY AND STATISTICAL MECHANICS (POLISET X00): 12 MONTHS \$75,000

MASEK, GEORGE E; HIGH ENERGY PHYSICS (POSESES); 12 MONTHS \$320,000

SWANSON, ROBERT A; ELEMENTARY PARTICLES (POJ2731); 12 MONTHS \$55,200

# UNIVERSITY OF CALIFORNIA, SANTA BARBARA

HARTLE, JAMES B; GENERAL RELATIVITY AND RELATIVISTIC ASTROPHYSICS (POSISSE X00); 12 MONTHS \$29,000

SAWYER, RAYMOND F, FULCO, J R, AND SUGAR, R L; PROBLEMS IN THEORETICAL PHYSICS (POJ4637 X00); 12 MONTHS \$73,000

# COLORADO

# UNIVERSITY OF COLORADO

SMITH, STEPHEN J; LOW ENERGY INTERACTIONS OF ELECTRONS WITH HYDROGENIC ATOMS (POI7174 001); 24 MONTHS \$74,900

DREITLEIN, JOSEPH, AND WYSS, WALTER; A PROGRAM IN MATHE-MATICAL PHYSICS (P019470 001); 12 MONTHS \$11,500

SMITH, STEPHEN J; THE THIRD INTERNATIONAL CONFERENCE ON ATOMIC PHYSICS (POJSPOJ); 12 MONTHS \$5,000

TAN, TAI HO; HIGH ENERGY PHYSICS (POSISSO); 12 MONTHS \$18,000

## UNIVERSITY OF DENVER

CHOU, TT; HIGH ENERGY HADRON-HADRON COLLISIONS (POSISSE); 24 MONTHS \$15,000

# ASPEN INSTITUTE OF HUMANISTIC STUDIES-ASPEN CENTER FOR PHYSICS INC

STRANAHAN, GEORGE S; SUMMER WORKSHOP ON CRITICAL PROBLEMS IN PHYSICS (POSISTS), 12 MONTHS \$33,000

## CONNECTICUT

## PAIRFIELD UNIVERSITY

HADJIMICHAEL, E, HARMS, E, AND NEWTON, V; EXAMINATION OF PARITY-VIOLATING FORCES BY MEANS OF RADIATIVE NEUTRON-DEUTERON CAPTURE (POSSTIL 001); 12 MONTHS \$16,900

# UNIVERSITY OF CONNECTICUT

RAWITSCHER, GEORGE H; ELECTRON-NUCLEUS AND NUCLEUS-NUCLEUS COLLISIONS (POOPER OI); 12 MONTHS \$18,600 KESSEL, QUENTIN C; INNER SHELL EXCITATIONS IN HEAVY ION-

ATOM COLLISIONS (POSISSE); 18 MONTHS \$17,200

#### YALE UNIVERSITY

HUGHES, VERNON W; POSITRONIUM RESEARCH (PORSTRE 001); 12 MONTHS \$68,000

HIRSHFIELD, J L; BASIC PLASMA PHYSICS (POSSOLO 001); 18 MONTHS \$127,000

SCHULZ, GEORGE J; COMPOUND STATES OF ATOMS AND RESONANCES IN ELECTRON SCATTERING (POSTAGE 901); \$20,000

BOCKELMAN, CHARLES K; ELECTRON-NUCLEAR SCATTERING (POSE189); 12 MONTHS \$79,500

BERNSTEIN, IRA B; TOPICS IN THEORETICAL PLASMA PHYSICS (PGJEJ74 X00); 12 MONTHS \$30,000

### DISTRICT OF COLUMBIA

#### AMERICAN UNIVERSITY

WHITE, JOHN A; CRITICAL POINT PHENOMENA IN FLUIDS (POI4118 001); 12 MONTHS \$33,000

CHERTOK, BENSON T, AND ADLER, RONALD J; NUCLEAR EXCITA-TION BY ELECTRONS AND PHOTONS (POISSES 008): 12 MONTHS 425,000

#### CATHOLIC UNIVERSITY OF AMERICA

CRANNELL, HALL, BRENNAN, JAMES O, UBERALL, HERBERT M, AND WERNTZ, CARL W; INVESTIGATION OF NUCLEAR STRUCTURE BY MEANS OF ELECTROMAGNETIC AND WEAK INTERACTIONS (POSISPI): 12 MONTHS \$63,100

#### GEORGETOWN UNIVERSITY

TREADO, PAUL A, AND LAMBERT, JAMES M; INTERACTION MECHANISMS AND NUCLEAR STRUCTURE USING THREE-BODY-FINAL-STAFE REACTIONS (P089167 001); 12 MONTHS \$25,000

#### HOWARD HAIVEPRITS

GLASS, SOLOMON J. MENDLOWITZ, HAROLD, AND KLEIN, LEWIS S; THEORETICAL PHYSICS (P008404 001): 12 MONTHS \$30,000

# NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

IVEY, JOHN H; CONSTRUCTION OF A LOW TEMPERATURE GRAVITA-TIONAL RADIATION DETECTOR (AGOS)14); 12 MONTHS \$45,000

# NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL

WOOD, GEORGE W; COMMITTEE ON LINE SPECTRA OF THE ELE-MENTS (C#10018 009); 36 MONTHS \$12,700

REED, C K; COMPITTEE ON NUCLEAR SCIENCE (C310047 009); 12 MONTHS \$17.500

### **FLORIDA**

# FLORIDA AGRICULTURAL AND MECHANICAL UNIVERSITY

VOURVOPOULOS, GEORGE; NUCLEAR PHYSICS RESEARCH (P634131); 12 MONTHS \$34,600

# FLORIDA STATE UNIVERSITY

EDWARDS, STEVE, AND ROBSON, DONALD; THEORETICAL LOW ENERGY NUCLEAR PHYSICS (POISSES 001); 24 MONTHS \$150,000

DAVIS, R H; NUCLEAR REACTIONS AND SPECTROSCOPY (PO25974 001); 12 MONTHS \$424,000

# GEORGIA

# GEORGIA INSTITUTE OF TECHNOLOGY

FINK, R W; INTERNATIONAL CONFERENCE ON INNER SHELL IONIZATION PHENOMENA (POSISSS), 12 MONTHS \$6,400

### UNIVERSITY OF GEORGIA

STEUER, M. F. DUNCAN, M. M., AND WOOD, R. M.; NUCLEAR PHYSICS (P021929 001); 12 MONTHS \$80,000

# ILLINOIS

# ILLINOIS INSTITUTE OF TECHNOLOGY

WARNOCK, ROBERT L; NONLINEAR ANALYSIS AND STRONG IN-TERACTIONS (POISESE 001); 24 MONTHS \$23,800

BURNSTEIN, RAY A; PROPERTIES OF MESONS AND HYPERONS (POSSESSES 001); \$15,200

BURNSTEIN, RAY A: PROPERTIES OF ELEMENTARY PARTICLES (POSSSS 5002); 12 MONTHS \$70,200

### NATIONAL ACCELERATOR LABORATORY

GOLDWASSER, EDWIN L; XVI INTERNATIONAL CONFERENCE ON HIGH ENERGY PHYSICS (AGOOSES); 6 MONTHS \$30,000

# NORTHWESTERN UNIVERSITY

BROWN, LAURIE M, AUVIL, PAUL R, DESHPANDE, NILENDRA G, KAYSER, BORIS J, AND OAKES, ROBERT J; THEORY OF THE FUNDA-MENTAL PARTICLES (POESEOS 001): 12 MONTHS \$70,000

SEGEL, RALPH E; NUCLEAR STRUCTURE RESEARCH (P025486 001); 12 MONTHS \$13,000



UNIVERSITY OF CRICAGO

ROOTHAAN, CLEMENS C J; QUANTUM MECHANICAL STUDIES OF ATOMS AND SMALL MOLECULES (PORTISE OOI): 12 MONTHS \$65,200

THOMPSON, R WITHE NATURE AND INTERACTIONS OF HIGH ENER-

OY BLEMENTARY PARTICLES (POSTTOS COI); \$14,600

PARKER, EUGENE N; THE NATURE AND INTERACTIONS OF HIGH ENERGY ELEMENTARY PARTICLES (POSTTOS COS); 8 MONTHS \$44,900 TELEGDI, V L; KAON EXPERIMENTS AND FURTHER STUDIES OF MUONIUM (POSSS 73 001); 12 MONTHS \$325,000

CRONIN, JAMES W: HIGH ENERGY PHYSICS (POISSE 001): 12 MONTHS \$240,000

GELFAND, N M; BUBBLE CHAMBER PHYSICS (PORIGES 001); 12 MONTHS

\$21,000 LEVI SETTI, R; HYPERON RESONANCE FORMATION IN THE 1 GEVIC

REGION (POSSESS OOI); 12 MONTHS \$70,000 HILDEBRAND, R H; EXPERIMENTAL STUDIES OF RARE LEPTONIC

AND SEMI-LEPTONIC PROCESSES (POSSTIT 001): 12 MONTHS \$75,000 ANDERSON, H L, WRIGHT, 8 C, AND MO, LUKE W; INELASTIC SCAT-TERING OF MUONS AT NAL (POSSESS 001): 12 MONTHS \$446,000

WINSTON, ROLAND, EXPERIMENTAL STUDY OF WEAK INTERAC-TIONS (POSSESS): 12 MONTHS \$149,000

HAMBU, YOICHIRO; ELEMENTARY PARTICLE PHYSICS (POSSES); X00); 12 MONTHS \$230,000

ANDERSON, H L; HIGH ENERGY PHYSICS RESEARCH AT THE BEVATRON (POSISTO): 18 MONTHS \$24,000

CHANDRASEKHAR, 8; GRAVITATIONAL PHYSICS AND RELATIVISTIC ASTROPHYSICS (POSLITE X00); 12 MONTHS \$89,200

UNIVERSITY OF ILLINOIS AT URBANA

BAYM, GORDON, AND WORTIS, MICHAEL; PROPERTIES OF SOLIDS AND MANY PARTICLE SYSTEMS (POISSES COI'); 24 MONTHS \$39,550

RAVENHALL, D G, AND WYLD, H W JR; THEORETICAL PARTICLE PHYSICS (P045505 001); 12 MONTHS \$129,000

FRAUENPELDER, HANS, AND DEBRUNNER, PETER G; NUCLEAR PHYSICS AND RELATED SUBJECTS (POSSESSE 001); 12 MONTHS \$100,000 AXEL, PETER; SUPERCONDUCTING ELECTRON ACCELERATOR AND NUCLEAR STRUCTURE RESEARCH (POSSIFS 001); 12 MONTHS \$300,000

#### INDIAMA

Indiana university, bloomington

BENT, R D, EMERY, G T, MILLER, D W, LANGER, L M, AND SINGH, P P; NUCLEAR STRUCTURE AND NUCLEAR PROCESSES (PORSISI 001); 12 MONTHS \$650,000

MARTIN, HUGH J, ALYEA, ETHAN D JR, CALLOWAY, KENNETH F. MERCER, ROBERT A, AND MOTT, JACK E; ELEMENTARY PARTICLE IN-TERACTIONS USING BUBBLE CHAMBERS (POSSETS SOI); 12 MONTHS \$115,000

NEWTON, ROGER C: INVESTIGATIONS IN THE THEORY AND IN-TERPRETATION OF PARTICLE COLLISIONS (POSISSY); 24 MONTHS \$52,000

STEFFEN, ROLF M, AND SCHARENBERG, ROLF P; NUCLEAR STRUC-TURE RESEARCH WITH AN FN TANDEM VAN DE GRAAFF ACCELERA. TOR (POSSOSS): 12 MONTHS \$200,000

UNIVERSITY OF NOTRE DAME

KENNEY, Y PAUL, AND POIRIER, JOHN A; ELEMENTARY PARTICLE INTERACTIONS (POSSESS 001); 12 MONTHS \$258,500

BROWNE, CORNELIUS P; NUCLEAR STRUCTURE RESEARCH (POLITISE 001); 18 MONTHS \$425,000

MINELICH, JOHN W; AN INVESTIGATION OF NUCLEAR ENERGY LEVELS (POSTOS), 19 MONTHS \$86,900
MARSHALEK, EUGENE R, AND SHANLEY, PAUL E; THEORETICAL STUDIES OF NUCLEAR STRUCTURE AND REACTIONS (POSTIST X00); 12 MONTHS \$21,000

JOHNSON, WALTER R: APPLICATIONS OF QUANTUM ELEC-TRODYNAMICS TO PROCESSES OF CURRENT INTEREST IN ATOMIC, NUCLEAR, AND SLEMENTARY PARTICLE PHYSICS (POSSES) X00); 12 JOHNSON, WALTER R; MONTHS \$28,600

## KANSAS

UNIVERSITY OF KANSAS

AMMAR, RAYMOND G, AND STUMP, ROBERT; HIGH ENERGY IN-TERACTIONS USING BUBBLE CHAMBERS (POSSIS OG.): 12 MONTHS \$97,000

ERONE, RALPH W, AND PROSSER, F W JR: NUCLEAR STRUCTURE STUDIES OF LIGHT AND MEDIUM LIGHT NUCLEI (POS1031); 12 MONTHS \$100,000

# KENTUCKY

UNIVERSITY OF KENTUCKY

KERN, B D, AND MCELLISTREM, M T; NUCLEAR STRUCTURE AND NUCLEAR REACTION MECHANISMS (POSSOSS 002); 8 MONTHS \$70,000

LOUISIANA STATE UNIVERSITY, BATON ROUGE

HUSSEY, ROBERT G; UNSTEADY FLOW IN VISCOUS FLUIDS (POISSED 001), 12 MONTHS \$20,300

HAMILTON, WILLIAM O; EXPERIMENTAL INVESTIGATIONS IN GRAVITATION (POSST40 008); 12 MONTHS \$109,803

TULANE UNIVERSITY

DURHAM, FRANK E, WILENZICK, RAYMOND M. AND BUCCINO, SAL-VATORE G; OPERATION OF A NUCLEAR PHYSICS LABORATORY (POSTAGE 001); IE MONTHS \$79,900

#### MARYLAND

JOHNS HOPKINS UNIVERSITY

PEVSNER, AIHUD; HIGH ENERGY PARTICLE PHYSICS (POI7148 001); 12 MONTHS \$339,200

JUDD, B R, AND ARMSTRONG, LLOYD JR; THEORY OF ATOMIC STRUC-

TURE (POSSOTI); 24 MONTHS \$47,600 CROSSWHITE, H M; OPTICAL SPECTROSCOPY OF IONS AND MOLECULES (POS4557); 12 MONTHS \$43,000

University of Maryland, college park

KRISHER, LAWRENCE C: MOLECULAR PROPERTIES FROM MICROWAVE SPECTROSCOPIC STUDIES (POLITOM 001); 24 MONTHS \$44,700 GRIEM, H R, AND DESILVA, A W. PLASMA HEATING, LIGHT SCATTER-ING AND SPECTROSCOPY (POLESTE 001); 24 MONTHS \$145,000

MISNER, CHARLES W; THEORETICAL STUDIES OF ORAVITY (POINTE

001): \$12,400

GREENBERG, O W, AND ONEDA, S, ELEMENTARY PARTICLE THEORY AND QUANTUM FIELD THEORY (POSOTOS OOI); 12 MONTHS \$89,000

WEBER, JOSEPH; GRAVITATIONAL RADIATION EXPERIMENTS (PORESEE OCE); 12 MONTHS \$200,000

YODH, GAURANG B; STRONG INTERACTIONS FROM 100 GEV TO 8000

GEV (POSSOS 001); 13 MONTHS \$289,500
TRIVELPIECE, A W, PECHACEK, R E, AND DAVIDSON, R C; HIGH
TEMPERATURE PLASMAS (POSTISS 001); 12 MONTHS \$215,000

BENESCH, WILLIAM M. COPLAN, M A. AND WILKERSON, T D; ATOMIC AND MOLECULAR PROCESSES BEARING ON PHENOMENA (POSSESS 001); 12 MONTHS #88.900

DORFMAN, J ROBERT; STATISTICAL PHYSICS (POSSESS 001); 12 MONTHS \$11,000

REISER, M P. ZORN, G T. AND KIM, HOGIL: AN ELECTRON RING AC-CELERATOR WITH STATIC COMPRESSION SYSTEM (POLOTOGO 601); 12 MONTHS \$376,000

SUCHER, JOSEPH, AND DRAGT, ALEX: FOUNDATIONS OF RELATIVISTIC QUANTUM THEORY, INTERACTIONS OF HADRONS, AND ELECTROMAGNETIC INTERACTIONS OF ELEMENTARY SYSTEMS (POSSUS), 12 MONTHS \$57,000 MISNER, CHARLES W, THEORETICAL STUDIES OF GRAVITY (PORIOR

X00); 12 MONTHS \$51,500

MARTIN, FREDERICK W; X-RAY PRODUCTION BY HEAVY IONS (POS1874); 12 MONTHS \$49,900

## MASSACHUSETTS

HARVARD UNIVERSITY

RAMSEY, NORMAN F; A NEUTRON ELECTRIC DIPOLE MOMENT EX-PERIMENT AT GRENOBLE (FOST 148"); 48 MONTHS \$11,000

RAMSEY, NORMAN F; MOLECULAR BEAM AND HYDROGEN MASER RESEARCH (P013547 X01); 12 MONTHS \$90,000

RAMSEY, NORMAN F; MOLECULAR BEAM AND HYDROGEN MASER RESEARCH (P013547 X02), \$20,000

PIPKIN, FRANCIS M; ATOMIC PHYSICS EXPERIMENTS USING FAST ATOMIC BEAMS AND PHOTON COINCIDENCE TECHNIQUES (POSETRET 001); 12 MONTHS \$69,400

COLEMAN, SIDNEY R. AND GLAUBER, ROY J. INTERACTIONS OF PARTICLES AND FIELDS (POSOSIS X00), 18 MONTHS \$60,100

JAFFE, ARTHUR M; MATHEMATICAL PHYSICS (POSISSE X004); 12 MONTHS \$14,000

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

JAVAN, ALI; ATOMIC AND MOLECULAR PROCESSES WITH MODERN PRECISION SPECTROSCOPIC TECHNIQUES (POISIAI DOI); \$50,000

KLEPPNER, DANIEL; ATOMIC INTERACTIONS (POSSS78 001); \$24,700 CHENG, HUNG; HIGH-ENERGY COLLISIONS (POSSIES 001); 12 MONTHS \$25,000

NORTHBASTERN UNIVERSITY

GETTINER, MARVIN, AND WEINSTEIN, ROY; EXPERIMENTS AT THE

NATIONAL ACCELERATOR LABORATORY (POSSET 001): \$67,200
ARNOWITT, RICHARD, AARON, RONALD, COLDBERG, HYMAN, AND
SRIVASTAVA, YOGENDRA; PARTICLE THEORY (POSSES 001): 18 KONTHS \$56,400

SOUTHEASTERN MASSACHUSETTS UNIVERSITY

KERN, WOLFHARD; HIGH ENERGY COLLIDING EOE. BEAMS WITH A MAGNETIC DETECTOR (POSSESS): 12 MONTHS \$55,300

TUFTS UNIVERSITY

WEAVER, DAVID; THEORY OF LIEMENTARY PARTICLES (POSICES); 12 MONTHS \$7,600

UNIVERSITY OF MASSACHUSETTS, AMBERST

KROTKOV, ROBERT V; SCATTERING OF METASTABLE HYDROGEN ATOMS (P010023 002); 12 MONTHS \$24,800



BREHM, JOHN J. AND COOK, LERGY F; ELEMENTARY PARTICLE THEORY (POISSES COI); 24 MONTHS \$112,000

JONES, PHILLIPS B; OUTER SHELL SECITATION IN HEAVY-ATOM COLLISIONS (POISON 400); 12 MONTHS \$19,000

STERNHEIM, MORTON M; THEORY OF INTERACTIONS OF MESONS AND NUCLEONS WITH NUCLEI (POISSTS 001); 24 MONTHS \$7,000

PREYTAG, DISTRICH; HIGH ENERGY PHYSICS - COLLABORATIVE EX-PERIMENT AT NAL (POSSES): 12 MONTHS \$195-0

#### WILLIAMS COLLEGE

CRAMPTON, STUART B; HYDROGEN SPIN EXCHANGE PARAMETERS USING A HYDROGEN MASER (PO1454) 601); 24 MONTHS \$40,800

#### MICHIGAN

#### MICHGAN STATE UNIVERSITY

EDWARDS, TH: MOLECULAR SPECTRA IN THE NEAR INFRARED RE-GION (Poss#14 001); 12 MONTHS \$21,500

BLOSSER, HENRY G; NUCLEAR PRYSICS PROGRAM (POSTUS 001); 12 MONTHS \$775,000

ABOLINS, MARIS A, AND CHEN, K WENDALL; INELASTIC MUON SCATTERING AND NEUTRON-PROTON SCATTERING (POSSON 001); 12 MONTHS \$31,100

CHEN, & WENDELL; INELASTIC MUON SCATTERING AND NEUTRON-PROTON SCATTERING (POSSOTO 003); \$ MONTHS 196,000

MCMANUS, HUGK: SCATTERING PROBLEMS AND THE THEORY OF NUCLEAR STRUCTURE (POSISES X00): 12 MONTHS 862 800

SIGNBLL, PETER; THE NUCLEON-NUCLEON INTERACTION (POSISSO), 13 MONTHS \$40,000

SIGNELL, PETER; THE NUCLEON-NUCLEON INTERACTION (POSISEO X01); \$8,400

SMITH, GERALD A; HIGH ENERGY PHYSICS (POSITOR); 12 MONTHS

#### UNIVERSITY OF MICHIGAN

FEDERBUSH, PAUL, AND WILLIAMS, DAVID; APPLICATIONS OF FUNCTIONAL ANALYSIS AND FUNCTION THEORETICAL METHODS IN ELEMENTARY PARTICLE PHYSICS (PO1732) 001); 18 MONTHS \$15,000

JONES, LAWRENCE W; NUCLEON-NUCLEON TOTAL CROSS SECTIONS (POSSISS 001): 12 MONTHS \$120,900

HECHT, K T; NUCLEAR STRUCTURE THEORY (POSSES); 24 MONTHS \$67,100

JONES, LAWRENCE W, LONGO, MICHAEL J, AND OVERSETH, OLIVER E; ELEMENTARY PARTICLE PHYSICS (POSSISS 400): 12 MONTHS \$342,000 WIEDENBECK, M L; NUCLEAR SPECTROSCOPY (POSSOSS): 12 MONTHS \$74,400

ZORN, JENS C; TIME-OF-FLIGHT EXPERIMENTS WITH METATABLE ATOMS AND MOLECULES (POSSSI); 12 MONTHS \$44,000

### WAYNE STATE UNIVERSITY

PICCIRELLI, R A; MOLECULAR THEORY OF FLUIDS FOR RAPID VARIATION IN SPACE AND TIME AND FOR STRONG FORCES (POISSIL 601); 12 MONTHS \$8,500

# MINNESOTA

# UNIVERSITY OF MINNESOTA

MOLDOVER, MICHAEL R; CRITICAL POINT OF PHASE TRANSITIONS (POI4431 001); 10 MONTHS \$17,400

### MISSOURI

# UNIVERSITY OF MISSOURI, COLUMBIA

SCHMIDT, PAUL W; SMALL ANGLE X-RAY SCATTERING (P019528 X00); 12 MONTHS \$17,500

### UNIVERSITY OF MISSOURI, ROLLA

PARK, JOHN T; HEAVY ION ENERGY LOSS SPECTROMETRY (PG11445 694); 12 MONTHS \$25,900

# UNIVERSITY OF MISSOURI, ST LOUIS

FOSTER, CHARLES; ELASTIC SCATTERING OF COMPLEX NUCLEAR-ACCELERATED PARTICLES AT EXTREME BACK ANGLES (POS4724); 12 MONTHS \$14,100

# WASHINGTON UNIVERSITY

FEENBERG, BUGENE, AND CLARK, JOHN W; THE MICROSCOPIC THEORY OF QUANTUM FLUIDS AND EXTENDED NUCLEAR SYSTEMS (HOLLSAY), 12 MONTHS \$20.050

# NEBRASKA

# UNIVERSITY OF NEBRASKA AT LINCOLN

RUDD, M EUGENE, JAECKS, DUANE H, BURNS, DONAL, AND MACEK, JOSEPH; INELASTIC PROCESSES IN ATOMIC COLLISIONS (P015184 001); 24 MONTHS 8170,000

# NEW HAMPSHIRE

# UNIVERSITY OF NEW HAMPSHIRE, DURHAM

BALLING, L C; RF SPECTROSCOPY OF ATOMS AND IONS (P016814 001); 12 MONTHS \$20,000

#### **NEW JESSEY**

# INSTITUTE FOR ADVANCED STUDY

DYSON, FREEMAN J, AND BAHCALL, JOHN N; THEORETICAL PHYSICS (POISI47 001); 24 MONTHS \$240,000

#### PRINCETON UNIVERSITY

O'NEILL, GERARD K; COLLIDING BEAMS (POSTST4 001); \$14,000

O'NEILL, GERARD K; DISCRETE AND CONTINUUM EXCITED DATA STATES OF THE PROTON, TO MASSES UP TO 8 GEV (Postati cos); 12 MONTHS \$130,500

GOLDBERGER, M. L; THEORETICAL PHYSICS (POSO188 X00); 12 MONTHS \$80,000

PEEBLES, P J E; GRAVITATION, RELATIVITY AND COSMOLOGY (POJO269 X00): 12 MONTHS \$302,400

GARVEY, GERALD T; LOW ENERGY NUCLEAR PHYSICS (POSSESS); 12 MONTHS \$599,600

#### RUTGERS UNIVERSITY

TEMMER, GEORGES M; NUCLEAR STRUCTURE RESEARCH WITH A TANDEM ACCELERATOR (POSSSI 001); 6 MONTHS \$228,900

PLANO, RICHARD J, AND WATTS, TERENCE L; ELEMENTARY PARTI-CLE PHYSICS RESEARCH USING BUBBLE CHAMBERS (POSPOR, 001); \$4,000

MAGLICH, BOGDAN; RESEARCH IN BLEMENTARY PARTICLE PHYSICS (POSSTOO 001); 12 MONTHS \$160,000

DEVLIN, THOMAS J; EXPERIMENTAL RESEARCH IN ELEMENTARY PARTICLE PHYSICS (POSISSES); 12 MONTHS \$40,000

#### STEVENS INSTITUTE OF TECHNOLOGY

SEIDL, MILOS; NONLINEAR BEAM PLASMA INTERACTION (POSITES 001); 12 MONTHS \$54,200

SEIDL, MILOS; NONLINEAR BEAM PLASMA INTERACTION (POR4762 GOS); \$17,800

ANDERSON, JAMES L; APPLICATION OF MOMENT METHODS TO PROBLEMS OF RELATIVISTIC TRANSPORT AND RADIATIVE TRANSFER (POSICE); 18 MONTHS \$10,500

#### **NEW YORK**

#### BROOKLYN COLLEGE

FRANCO, VICTOR; THEORETICAL STUDIES IN MEDIUM AND HIGH-ENERGY NUCLEAR AND ATOMIC PHYSICS AND IN THE THREE-BODY PROBLEM (POISDIS 001); 12 MONTHS \$10,000

## CITY COLLEGE

RUBIN, KENNETH; LOW ENERGY ELECTRON-ATOM ELASTIC AND IN-ELASTIC TOTAL AND DIFFERENTIAL CROSS SECTION MEASURE-MENTS (POSSOM 001); 12 MONTHS \$25,100

SAKITA, BUNJI; PROBLEMS IN STRONG AND WEAK INTERACTIONS -DUAL THEORY AND INTERMEDIATE BOSONS (Posesse); 12 MONTHS \$50,000

### COLUMBIA UNIVERSITY

NOVICK, ROBERT; METASTABLE AUTOIONIZING ATOMIC STATES AND THE METASTABLE HELIUM ION (POI3478-001); \$25,000

LEDERMAN, LEON M, SACHS, A M, RAINWATER, J, WU, C S, AND DEVONS, SAMUEL; RESEARCH PROGRAM AND SYNCHROCYCLOTRON OPERATION (PO12726 001); 12 MONTHS \$1,500,000

WU, C S; LOW ENERGY NUCLEAR PHYSICS AND WEAK INTERACTIONS (POSISSS), 12 MONTHS \$150,100

RUDERMAN, MA, AND SPIEGEL, EA; THEORETICAL ASTROPHYSICS (POSSSIS X00); 12 MONTHS \$75,000

LEDERMAN, LEON M, FRANZINI, P, LEE, W, BALTAY, C, AND STEIN-BERGER, J; HIGH ENERGY PHYSICS (POSS\$55); 12 MONTHS \$1,860,000

# CORNELL UNIVERSITY

MCDANIEL, B D; OPERATIONA! SUPPORT OF THE 10 GEV ELECTRON SYNCHROTRON FACILITY (C347000 018\*); 12 MONTHS \$2,630,000

MCDANIEL, B D; OPERATIONAL SUPPORT OF THE 10 GEV ELECTRON SYNCHROTRON FACILITY (C537000 013\*); \$40,000

FLEISCHMANN, H. H; CHARGE EXCHANGE AND STRIPPING IN HEAVY-AFOM COLLISIONS (PO09501 001); 12 MONTHS \$37,100

OREAR, JAY, AND PEOPLES, JOHN: 11GH ENERGY PARTICLE IN-TERACTIONS (POIS#14 001): 12 MONTHS \$144,400

BETHE, HANS A; THEORETICAL NUCLEAR AND ELEMENTARY PAR-TICLE PHYSICS (P040006 001), 12 MONTHS \$200,000

HAND, LOUIS N; SCALE INVARIANCE OF HIGH MOMENTUM TRANSFER MUON INSLASTIC SCATTERING (POSSSIT 001); 12 MONTHS

GITTELMAN, BERNARD, AND LOH, EUGENE C; HIGH ENERGY PROTON-PROTON INTERACTIONS (POSS \$5 001); 12 MONTHS \$57,700

MCDANIEL, B D; 1571 INTERNATIONAL SYMPOSIUM ON ELECTRON AND PHOTON INTERACTIONS AT HIGH ENERGIES (POSONES); 12 MONTHS \$3,000

### FORDHAM UNIVERSITY

WEBER, ALFONS; HIGH RESOLUTION RAMAN SPECTROSCOPY OF GASES (POSISSO); 12 MONTHS \$21,800



#### NEW YORK UNIVERSITY

STROKE, H HENRY; HIGH-RESOLUTION OPTICAL MEASUREMENTS, ATOMIC HYPERFINE STRUCTURE AND ISOTOPE SHIFT (POISSES 001); 24 MONTHS \$100,200

STROKE, H HENRY; HIGH-RESOLUTION OPTICAL MEASUREMENTS, ATOMIC HYPERFINE STRUCTURE AND ISOTOPE SHIFT (POISESP DURY,

ROSENBERO, LEONARD; MULTIPARTICLE SCATTERING PROBLEMS (POISM? 001); 24 MONTHS \$12,100

ROSENBERG, LEONARD; MULTIPARTICLE SCATTERING PROBLEMS (POIE 147 002); \$12,100

BROWN, HOWARD H. AND BEDERSON, BENJAMIN; ATOM BEAM-PLASMA INTERACTION STUDIES AND PLASMAS IN THERMODYNAMIC EQUILIBRIUM (PO1718) 001); 12 MONTHS \$56,000

GLIMM, JAMES; QUANTUM FIELD THEORY (POLICOS 601\*); 12 MONTHS

CUMMINS, HERMAN 2, AND SWINNEY, HARRY L; LIGHT SCATTER-

ING STUDIES OF FLUIDS (POSI (#8): 24 MONTHS \$76,100

BUDICK, BURTON; SOFT X-RAYS FROM MUONIC, PIONIC AND KAONIC HYDROGEN ATOMS (POSISET); 12 MONTHS \$44,900

#### STATE UNIVERSITY AT STONY BROOK

LEE, LINWOOD L JR; OPERATION OF THE STONY BROOK NUCLEAR STRUCTURE LABORATORY (POSSOS) 901); 9 MONTHS \$200,100

LEE-FRANZINI, JULIET; DIFFRACTIVE STUDIES OF HADRONS AND DECAY OF THE KS MESON (POJERIE); 12 MONTHS \$180,100

GOOD, MYRON L, AND KIRZ, JANOS; EXPERIMENTAL HIGH ENERGY PHYSICS RESEARCH USING COUNTER TECHNIQUES (POSSESS); 12 MONTHS \$161,400

YANG, CHEN NING; THEORETICAL PHYSICS (POJ9998 X00); 12 MONTHS \$177,100

#### SYRACUSE UNIVERSITY

ROHRLICH, FRITZ; QUANTUM FIELD THEORY AND RELATED PROBLEMS (P012536 001); 24 MONTHS \$67,100

ROHRLICH, FRITZ; QUANTUM FIELD THEORY AND RELATED PROBLEMS (POISSS 002); \$8,600

GOLDBERG, MARVIN, HORWITZ, NAHMIN, KALOGEROPOULOS, TED E, AND MONETI, GIANCARLO; EXPERIMENTAL ELEMENTARY PARTICLE PHYSICS (PG1(413), 12 MONTHS \$300,500

BERGMANN, PETER G, AND GOLDBERG, JOSHUA N; GENERAL RELATIVITY (POJ464: X00); 12 MONTHS \$49,500

# UNIVERSITY OF ROCHESTER

THORNDIKE, EDWARD H, AND LOBKOWICZ, FREDERICK; HIGH ENERGY PHOTOPRODUCTION STUDIES (PORTRO) 001; 12 MONTHS \$180,600

ALFORD, W P; OPERATION OF NUCLEAR STRUCTURE RESEARCH LABORATORY (POST 170 001); 12 MONTHS \$775,000

STROUD, CARLOS, NON-LINEAR AND PARAMETRIC RESPONSE OF ATOMS TO A RESONANT FIELD (P030373); 24 MONTHS \$19,000

DOUGLASS, DAVID H; NATURE OF EXTRATERRESTRIAL SOURCES
OF GRAVITATIONAL RADIATION (POSITIV): 12 MONTHS \$59.300

#### YESHIVA UNIVERSITY

CAMERON, A G W; NUCLEOSYNTHESIS AND ASTROPHYSICS (PGJ1247 X00\*), 12 MONTHS \$35,000

# GENERAL ELECTRIC COMPANY-RESEARCH AND DEVELOPMENT $\emph{C}$ ENTER

HART, EDWARD W; TENTH ANNUAL EASTERN THEORETICAL PHYSICS CONFERENCE, OCTOBER 29-30, 1971 (POSI090); 12 MONTHS \$3,100

#### **NORTH CAROUNA**

### DUKE UNIVERSITY

BIEDENHARN, L C, CUSSON, R Y, AND HAN, M Y; THEORETICAL PHYSICS (POIAII 6 001); 24 MONTHS \$80,000

GORDY, WALTER; DEVELOPMENT AND APPLICATION OF SUBMIL-LIMETER RADIO WAVES (PGJ4590); 12 MONTHS \$60,000

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# CASE WESTERN RESERVE UNIVERSITY

ROBINSON, D K; PARTICLE INTERACTIONS IN THE DEUTERIUM BUBBLE CHAMBER (P041490); 12 MONTHS \$131,600

KOWALSKI, K L; THEORETICAL STUDIES IN NUCLEAR STRUCTURE AND SCATTERING (POISISS X00); 12 MONTHS \$89,100 BROWN, ROBERT W; THEORETICAL ELEMENTARY PARTICLE

BROWN, ROBERT W; THEORETICAL ELEMENTARY PARTICLE PHYSICS (POSS119); 84 MONTHS \$14,000

#### OHIO STATE UNIVERSITY

HAUSMAN, H J. ARNS, R G, DONOGHUE, T R, AND BLATT, S LESLIE; NUCLEAR PHYSICS RESEARCH WITH A 5.5 MEV VAN DE GRAAFF ACCELERATOR (P010763 004); 8 MONTHS \$100,000

# UNIVERSITY OF CINCINNATI

RUSSELL, JAMES E; CASCADE IN MESONIC ATOMS (POROBRE 001); 12 MONTHS \$8,000

NUSSBAUM, MIRKO M; ELEMENTARY PARTICLE INTERACTIONS (POSESSO); 12 MONTHS \$48,700

#### ORIGON

### **OREGON STATE UNIVERSITY**

MADSEN, VICTOR A: THEORETICAL LOW ENERGY NUCLEAR PHYSICS (POJ1553): 24 MONTHS \$2x500

#### UNIVERSITY OF OREGON - RUGENE

LEFEVRE, H W, MCDANIELS, D K, AND OVERLEY, J C; NEUTRON PHYSICS AND ELECTROMAGNETIC TRANSITIONS IN NUCLEI (POSISS); 12 MONTHS \$143,000.

# PENNSYLVANIA

#### CARNEGIE-MELLON UNIVERSITY

KISSLINGER, L S. AND SORENSEN, R A; THEORETICAL NUCLEAR PHYSICS (POSISSI X00); 12 MONTHS \$60,000

#### DREXEL UNIVERSITY

GELLER, KENNETH N; REACTION STUDIES AT TANDEM BOMBARD-ING ENERGIES (P024680 001); 12 MONTHS \$20,000

#### LEHIGH UNIVERSITY

MCLENNAN, JAMES A; NONEQUILIBRIUM STATISTICAL MECHANICS AND KINETIC THEORY (P013517 008); 12 MONTHS \$15,000

#### PENNSYLVANIA STATE UNIVERSITY

WIGGINS, T A, AND PLIVA, JOSEF; PRECISION INFRARED SPEC-TROSCOPY AND LIGHT SCATTERING (POISOS4 002); 12 MONTHS \$10,000

## TEMPLE UNIVERSITY

HAVAS, PETER; RELATIFISTIC THEORY OF INTERACTING PARTI-CLES (POI 4183 001); 12 MONTHS \$25,060

GREEN, MELVILLE S; STATISTICAL MECHANICS (POISSS 001); 24 MONTHS \$91,000

# UNIVERSITY OF PENNSYLVANIA

MIDDLETON, ROY, AND STEPHENS, WILLIAM; NUCLEAR RESEARCH WITH TANDEM ACCELERATOR (POSSESS 001): 6 MONTHS \$253,200

AMADO, R D, AND PRIMAKOFF, HENRY; THEORETICAL PHYSICS (P033959 X00); 12 MONTHS \$35,000

#### UNIVERSITY OF PITTSBURGH

FITE, WADE L; ATOMIC HYDROGEN COLLISION STUDIES (POITEST 001); 12 MONTHS \$86,600

JANIS, ALLEN 1, AND NEWMAN, EZRA T; RADIATION AND SINGULARITIES IN GRAVITATIONAL THEORY (POSITISS ON); 12 MONTHS \$30,000 COHEN, BERNARD L, DAEHNICK, WILFRIED W, MCGRUER, JAMES N, SALADIN, JURO X, AND MAHER, JAMES V; NUCLEAR STRUCTURE AND NUCLEAR REACTIONS (POSISIS ON); 6 MONTHS \$280,000

PRATT, R H; THEORY OF QUANTUM ELECTRODYNAMIC PROCESSES IN THE FIELD OF AN ATOM (POS8798); 12 MONTHS \$35,000

CLELAND, W E, AND ENGELS, E JR; EXCITED STATES OF HYPERONS (POLISS): 12 MONTHS \$100300

### FRANKLIN INSTITUTE-BARTOL RESEARCH FOUNDATION

METZGER, F R; NUCLEAR STRUCTURE STUDIES USING PHOTONS (Postess); 12 MONTHS \$65,000

# RHODE ISLAND

# GORDON RESEARCH CONFERENCES

CRUICKSHANK, ALEXANDER M; GORDON CONFERENCE ON PLASMA PHYSICS (PGJ5188); 12 MONTHS \$2,400

# TENNESSEL

# OAK RIDGE NATIONAL LABORATORY

LIVINGSTON, ROBERT S; INTERNATIONAL CONFERENCE ON MUL-TIPLY-CHARGED HEAVY ION SOURCES AND ACCELERATING SYSTEMS (AGOO283): 12 MONTHS \$4,600

#### VANDERBILT UNIVERSITY

PINKSTON, WILLIAM T; NUCLEAR STRUCTURE ASPECTS OF DIRECT REACTIONS (POISOTI 001); 12 MONTHS \$12,400

PANVINI, R.S., AND WEBSTER, M.S.; BUBBLE CHAMBER STUDIES OF SELECTED FIGH-ENERGY HADRONIC COLLISIONS (PORILISION); 12 MONTHS \$176,700

HAMILTON, JOSEPH H, AND ALBRIDGE, ROYAL G; EXPERIMENTAL NUCLEAR SPECTROSCOPY (PORTIL 7001); 12 MONTHS \$55,800

KUMAR, KRISHNA; QUASI-MICROSCOPIC THEORY OF NUCLEAR STRUCTURE (PG\$4654); 12 MONTHS \$6,000

ATOMIC ENERGY COMMISSION-OAK RIDGE OPERATIONS OFFICE-AEC MARTIN, JOHN A; EVALUATION SERVICES (CA07500); 13 MONTHS 81.500

### TEXAS

## BAYLOR UNIVERSITY

POWERS, DARDEN; ENERGY LOSS OF ALPHA PARTICLES IN MATTER (POISTER 001); 12 MONTHS \$20,700

#### TEXAS A & M UNIVERSITY

SUGIHARA, TT; CYCLOTRON-BASED NUCLEAR PHYSICS (Postoss); 12 MONTHS \$250,000



#### TREASTRON UNIVERSITY

QUADE, C RICHARD; INTERNAL ROTATION IN ASYMMETRIC-ASYM-METRIC MOLECULES (POISS), 12 MONTHS \$18,200

#### UNIV OF TEXAS AT AUSTIN

GENTLE, KENNETH W; EXPERIMENTAL STUDY OF STRONG PLASMA TURBULENCE (POIST4F 001); 24 MONTHS \$152,500

ARNETT, W DAVID, AND DAVIDS, CARY N; NUCLEAR ASTROPHYSICS-EXPERIMENTAL AND THEORETICAL (POSSESS GOI); 12 MONTHS 840,000

OAKES, MELVIN E; NON-LINEAR LOWER HYBRID WAVES (POSTISE OOL): 12 MONTHS 818 000

DRUMMOND, WILLIAM E; OBLIQUE COLLISIONLESS SHOCK WAVES IN PLASMA (POSTITS OCI); 12 MONTHS \$110,000

DRUMMOND, WILLIAM E; OBLIQUE COLLISIONLESS SHOCK WAVES IN PLASMA (POSTITS GOS); \$27,100

DEWITT, BRYCE S; THE ROLE OF GRAVITATION IN PHYSICS (FOSFOST); 24 MONTHS \$49,300

SCHILD, ALFRED, SHEPLEY, LAWRENCE O, AND MATZNER, RICHARD A: RELATIVITY AND GRAVITATIONAL THEORIES (POSSESS X00); 12 MONTHS \$46,000

# UNIV OF TEXAS AT DALLAS

OZSVATH, ISTVAN, RINDLER, WOLFGANG, AND ROBINSON, IVOR; GENERAL RELATIVITY (POTRES 1001); 12 MONTHS \$27,500

#### UNIVERSITY OF BOUSTON

SHELDON, WILLIAM R; COSMIC RAY MUON INVESTIGATIONS (POSOSIS); 18 MONTHS \$32,700

#### HATU

#### UNIVERSITY OF UTAH

KEUFFEL, J W; COSMIC RAY MUONS AND NEUTRINOS (POR1452 001); 24 MONTHS \$451,400

# VIRGINIA

UNIVERSITY OF VIRGINIA
ZIOCK, KLAUS O H; FRACTIONALLY CHARGED PARTICLES (POISOSO);
12 MONTHS \$1,300

LOWRY, R A; DETERMINATION OF NEWTON'S GRAVITATIONAL CON-STANT, G, WITH IMPROVED PRECISION (POSISSO), 12 MONTHS \$29,000

#### VIRGINIA POLYTECHNIC INSTITUTE

COLLINS, GEORGE B; MULTIGAMMA EVENTS FROM MAGNETIC MONOPOLE PAIRS (POSISSE); 24 MONTHS \$50,000

JENKINS, DAVID, NUCLEAR AND PARTICLE EXPERIMENTS AT AR-GONNE, BROOKHAVEN AND LAMPF (POJ4818); 12 MONTHS \$70,000

# COLLEGE OF WILLIAM AND MARY-CHRISTOPHER NEWPORT COLLEGE

SIEGEL, ROBERT T; OPERATIONAL SUPPORT OF SYNCHRO-CYCLOTRON RESEARCH (P034901); 12 MONTHS \$67,300

# WASHINGTON

# UNIVERSITY OF WASHINGTON

DEHMELT, HANS U; ISOLATED ATOMIC PARTICLES FLOATING AT REST IN FREE SPACE (POR 1467 001); 12 MONTHS \$46,800

FORTSON. E NORVAL; SPIN ORIENTED STATES OF ATOMS AND IONS USING EXCHANGE COLLISION TECHNIQUES (POLISE 4001); 12 MONTHS \$30,000

WILLIAMS, ROBERT W. AND COOK, VICTOR: ELEMENTARY PARTI-CLE PHYSICS USING HIGH ENERGY ACCELERATORS (PO2J573 001); 12 MONTHS \$424,900

#### WISCONSIN

## UNIVERSITY OF WISCONSIN, MADISON

FITZSIMMONS, W A; ELECTRONS, IONS, EXCITED ATOMS, AND EXCITONS IN NOBLE GASES, LIQUIDS, AND SOLIDS (P011704 001); 24 MONTHS \$54,900

MCVOY, KIRK W; NUCLEAR THEORY (POISIDE 001); 24 MONTHS \$67,800

# UNIVERSITY OF WISCONSIN, MILWAUKEE

PARKER, LEONARD: QUANTIZED FIELDS AND PARTICLE CREATION IN THE EARLY UNIVERSE (POINTIE); 12 MONTHS \$13,200

# CHEMISTRY

### ALABAMA

# ALABAMA AGRICULTURAL AND MECHANICAL UNIVERSITY

EVANS, RICHARD A; COSIP D RESEARCH INITIATION · NOVEL REAR-RANGEMENT REACTIONS OF SOME MEDIUM RING COMPOUNDS (Y01040); 15 MONTHS \$17,600

# UNIVERSITY OF ALABAMA. TUSCALOOSA

ATWOOD, JERRY L; ANIONIC ORGANOALUMINUM COMPLEXES (POSUSS); 24 MONTHS \$22,500

ABRAMOVITCH, R A; THE CHEMISTRY OF NITRENES AND RELATED INTERMEDIATES (POSSISSI X00); 12 MONTHS \$35,200

#### ARIZONA

#### ARIZONA STATE UNIVERSITY

MOELLER, THERALD; COMPLEXATION OF LANTHANIDE IONS IN NON-AQUEOUS MEDIA (POISO41 001); 24 MONTHS \$43,500

JUVET, RICHARD S JR; INGROANIC AND PHOTOLYTIC DEGRADATION GLC. MEDICINAL INGREDIENTS IN CHINESE HERBS (POISSS) 001); 24 MONTHS \$14,000

#### UNIVERSITY OF ARIZONA

BURKE, MICHAEL F; THERMODYNAMIC STUDIES OF GAS-SOLID CHROMATOGRAPHY (PO17338 001); 24 MONTHS \$28,200

BATES, ROBERT B; RESONANCE-STABILIZED ANIONS AND RADI-CALS (POSITIS 008): 12 MONTHS \$28,900

FERNANDO, QUINTUS; ORGANIC ANALYTICAL REAGENTS (POR 4500 001): \$5.000

STEELINK, CORNELIUS; FREE RADICAL INTERMEDIATES IN THE ENZYMATIC OXIDATION OF LIGNIN PHENOLS (POSSISS X00); 12 MONTHS \$22.400

#### **ARKANSAS**

# UNIVERSITY OF ARKANSAS

FRY, ARTHUR, AND SIMS, LESLIE B; HEAVY ATOM ISOTOPE EF-FECTS IN ORGANIC REACTIONS (POSSUES X00); 12 MONTHS \$60,100

#### CALIFORNIA

# CALIFORNIA INSTITUTE OF TECHNOLOGY

RICHARDS, JOHN H; CHEMISTRY OF METALLOCENES (POOSSOR XOS); 5 MONTHS \$9,800

GODDARD, WILLIAM A III; THEORETICAL STUDY OF THE WAVEFUNCTIONS FOR REACTIONS OF MOLECULES (POISIRS 601); 24 MONTHS \$49.900

IRELAND, ROBERT E; THE TOTAL SYNTHESIS OF TRITERPENES (POJ0050 X00); 12 MONTHS \$51,600

BERGMAN, ROBERT G; SYNTHESIS AND MECHANISMS OF REACTION OF THREE-MEMBERED RING COMPOUNDS (POJISSI XOO); 12 MONTHS \$30,000

HAMMOND, GEORGE S; ORGANOMETALLIC COMPOUNDS IN PHOTOCHEMISTRY AND OXIDATION SYSTEMS (PGJ1507); 24 MONTHS 268,800

ROBINSON, G WILSE; VAPOR PHASE NUCLEATION (POSSUS X00); 12 MONTHS \$34,300

ROBERTS, JOHN D; STRUCTURES AND REACTION MECHANISMS OF ORGANIC COMPOUNDS (POJ2818 X00); 12 MONTHS \$94,200

# CALIFORNIA STATE UNIVERSITY, LONG BEACH

MARSI, KENNETH L; MECHANISMS OF REACTIONS OF PHOSPHORUS HETEROCYCLES (P085479 001); \$5,100

# CALIFORNIA STATE UNIVERSITY, LOS ANGELES

FRATIELLO, ANTHONY; AN NMR STUDY OF COMPLEXES OF BORANE AND BORON TRIHALIDES WITH ORGANIC BASES (P009517 002); 24 MONTHS \$37,000

### CALIFORNIA STATE UNIVERSITY, SAN DIEGO

BENNETT, LARRY E; COORDINATED SULFUR AND POLYNUCLEAR COMPLEXES (POJOSIE); 24 MONTHS \$23,600

RING, MOREY A; PYROLYSIS OF CATENATED NON-METALLIC HYDRIDES AND REVERSE CARBENE ANALOG INSERTION REACTIONS (POJS450); 24 MONTHS \$34300

#### CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO

WALKER, FRANCES ANN; REACTIONS OF COBALT(II) PORPHYRINS (POSISS X00); 12 MONTHS \$11,000

## STANFORD UNIVERSITY

ANDERSEN, HANS C; STATISTICAL MECHANICS OF ATOMIC AND MOLECULAR FLUIDS (POROOSS 001): 24 MONTHS \$40,000

VAN TAMELEN, EUGENE E; BIOGENESIS AND BIOGENETICALLY.
PATTERNED SYNTHESES OF NATURAL PRODUCTS AND RELATED
SUBSTANCES (P0#3019 X01); 12 MONTHS \$42,900

MCCONNELL, HARDEN, AND JARDETZKY, OLEG; HIGH FREQUENCY HIGH RESOLUTION NUCLEAR MAGNETIC RESONANCE FACILITY (POSSESS); 12 MONTHS \$250,000

TAUBE, HENRY; OXIDATION-REDUCTION MECHANISMS (POR4726 X01); 12 MONTHS \$52,500

BRAUMAN, JOHN I; HYDROGEN TRANSFER REACTIONS (PORTSER 001); 89.200

KUHLMANN, KARL F; APPLICATION OF MAGNETIC RESONANCE TECHNIQUES TO PROBLEMS IN STRUCTURAL CHEMISTRY (POSEGSO X00); 12 MONTHS \$62,400

JOHNSON, WILLIAM S; SYNTHETIC STUDIES RELATED TO NATURAL PRODUCTS (P031486 X00); 12 MONTHS \$61,400

# UNIVERSITY OF CALIFORNIA, BERKELEY

HILDEBRAND, JOEL H; PROPERTIES AND SOLUBILITY RELATIONS OF NONELECTROLYTES (POSE 480 001); \$6,000

DAUBEN, WILLIAM G; STRUCTURAL STUDIES IN ALICYCLIC SYSTEMS (Poostoo Xot); 12 MONTHS \$40,000



HEARST, JOHN E; HYDRODYNAMIC PROPERTIES OF DILUTE POLYMER SOLUTIONS (POSSSIE XOI); 12 MONTHS \$17,000

STREITWIESER, ANDREW JR. AB INITIO QUANTUM ORGANIC CHEMISTRY (POSSUS) X01); 18 MONTHS \$34,500

HEATHCOCK, CLAYTON H; STUDIES IN ORGANIC SYNTHESIS (POSISE) X00); 12 MONTHS \$29,700

STREITWIESER, ANDREW JR; RARE EARTH ORGANOMETALLIC CHEMISTRY (PG91601 X00); 12 MONTHS \$48,400

SCHAEFER, HENRY F III; ELECTRON CORRELATION IN MOLECULES (POI1874); 24 MONTHS \$49,400

MCCLAIN, WILLIAM M: TWO-PHOTON MOLECULAR SPECTROSCOPY (P618946 X00); 12 MONTHS \$48,000

JENBEN, FREDERICK R; MECHANISMS OF ORGANIC REACTIONS (Porses X00): 18 MONTHS \$50,000

MOORE, & BRADLEY, SPECTROSCOPIC STUDIES OF ENERGY TRANSFER AND APPLICATIONS OF TUNABLE LASERS IN CHEMISTRY (POISSE X00); 12 MONTHS \$42,000

HARRIS, CHARLES B: COHERENT MIGRATION OF TRIPLET EX-CITONS IN MOLECULAR CRYSTALS (POS 1081 X00); 12 MONTHS \$42,600 MILLER, WILLIAM H; THEORY OF LOW ENERGY ATOMIC AND

MOLECULAR COLLISIONS (POSISES X00); 18 MONTHS \$24,500 GWINN, WILLIAM D; SPECTROSCOPY AND MOLECULAR STRUCTURE (POS \$338 X00); 12 MONTHS \$48,800

# UNIVERSITY OF CALIFORNIA, DAVIS

VOLMAN, DAVID; PHOTOLYSIS OF CHLOROPROPENES, AND REAC-TIONS OF HYDROXYL RADICALS (POISOTS 001): 9 MONTHS \$8,500

ROCK, PETER A; THERMODYNAMICS OF HYDROGEN, LITHIUM, AND CALCIUM ISOTOPE EXCHANGE REACTIONS (POSSESS): 24 MONTHS \$27,100

# UNIVERSITY OF CALIFORNIA, IRVINE

MOORE, HAROLD W: CHEMISTRY OF AZIDOQUINONES AND RE-LATED COMPOUNDS (POISES 001); 24 MONTHS \$38,800

DOEDENS, ROBERT J: STRUCTURAL STUDIES OF TRANSITION METAL COMPLEXES (POROMOS 001): 24 MONTHS \$35,000

K C; TRACER AND LUMINESCENCE STUDIES OF E PHOTOCHEMICALLY GENERATED EXCITED MOLECULES (FOLSOIO XOI); 12 MONTHS \$25,500

PLEISCHER, EVERLY B, NEW DIRECTIONS IN COORDINATION CHEMISTRY (POJOSSO XOO); 12 MONTHS \$32,500

# UNIVERSITY OF CALIFORNIA, LOS ANGELES

LIGHTNER, DAVID A; OPTICAL ACTIVITY- DISSYMMETRIC CHROMOPHORES, FRONT OCTANT AND ANTI-OCTANT PERTURBERS (P009538 001): 12 MONTHS \$18,700

REISS, HOWARD, FURTHER RIGOROUS DEVELOPMENT OF SCALED

PARTICLE THEORY (POIRIOS 001), 24 MONTHS \$35,800

HAWTHORNE, M FREDERICK; MECHANISM STUDIES RELATED TO THE CHEMISTRY OF POLYHEDRAL BORANES (POLISTE XOI); 12 MONTHS \$38,000

JACOBS, THOMAS L; REACTIONS OF ALLENES (POSSEOT 001); 12 MONTHS \$10,500

KAESZ, HERBERT D: TRANSITION METAL CARBONYL HYDRIDES (PO\$5867 XO\$); 12 MONTHS \$37,800

FOOTE, CHRISTOPHER S; CHEMISTRY OF SINGLET OXYGEN AND RE. LATED TOPICS (P025750 001); \$27,200

ANET, FRANK A L; NUCLEAR MAGNETIC RESONANCE IN ORGANIC CHEMISTRY (POSTELL 001); \$6,000

REISS, HOWARD, SUBMIC BOANALYTICAL CHEMISTRY (PO28722 XOI); 12 MONTHS \$42,000

SCOTT, ROBERT L; LIQUIDS AND SOLUTIONS (POSO2RS X00); 12 MONTHS \$29,100

KIVELSON, DANIEL; LIGHT SCATTERING FROM LIQUIDS (POJO753 X00); 12 MONTHS \$41,600

MCTAGUE, JOHN P. LIGHT SCATTERING AND INTERMOLECULAR IN-TERACTIONS (POJOS10); 24 MONTHS \$40,000

KIVELSON, DANIEL; ELECTRONIC PARAMAGNETIC RESONANCE STUDIES OF FREE RADICALS (POSEOTE XOO): 12 MONTHS \$35,500

TRUEBLOOD, KENNETH N; DIFFRACTION STUDIES OF ORGANIC CRYSTALS (Postatt X00); 12 MONTHS \$30,800

LIGHTNER, DAVID A: PYRROLE PHOTOOXIDATION IN BILIRUBIN AND PORPHYRIN PHOTOCHEMISTRY (POSISS X00); 12 MONTHS \$25,000 CRAM, DONALD J; HETEROCROWN AND CARBANION CHEMISTRY (POSSSS X00); 12 MONTHS \$54,800

# UNIVERSITY OF CALIFORNIA, RIVERSIDE

SAWYER, DONALD T: NONAQUEOUS ELECTROCHEMISTRY OF METALLOFLAVIN MODEL COMPOUNDS (POISI14 001); 24 MONTHS \$58,300 OXAMURA, WILLIAM H: SYNTHESIS, STRUCTURE, AND PROPERTIES UNSATURATED NITROGEN HETEROCYCLES (PO17576 001); 24 MONTHS \$39,700

WING, RICHARD M; INORGANIC STRUCTURAL CHEMISTRY (POIDES) 904): 12 MONTHS \$22,500

SCHMIDT, HARTLAND H; CRITICAL PHENOMENA IN LIQUID-LIQUID AND LIQUID-VAPOR SYSTEMS (POSSOIO XOI); 12 MONTHS \$25,000

GIBIAN, MORTON J; FLAVIN REDOX CHEMISTRY AND FLAVOEN-ZYME MECHANISMS (POSISSS); 24 MONTHS \$39,900

DARLEY, ELLIS F. CHARACTERIBATION AND MODIFICATION OF SMOKE PRODUCTION IN THE COMBUSTION OF CELLULOSIC FUELS (POSISS): 12 MONTHS \$34,400

PITTS, JAMES N JR; CHEMISTRY OF OZONE AND SINGLET OXYGEN (PO\$4584); 12 MONTHS \$80,200

# UNIVERSITY OF CALIFORNIA, SAN DIEGO

MAYER, JOSEPH E; INTERACTING ATOMS (POJONIS XOO); 12 MONTHS \$35,600

SHULER, KURT E, MAYER, JOSEPH E, WEARE, JOHN H, AND WHEELER, JOHN C; THEORETICAL CHEMISTRY (POSSOS) 1200); 12 MONTHS \$77,800

BOND, F THOMAS; SYNTHESIS OF HIGHLY STRAINED COMPOUNDS (POSSETS); 24 MONTHS \$40,000

WILSON, KENT R; PHOTOFRAGMENT SPECTROSCOPY- INVESTIGA-TION OF DISSOCIATIVE MOLECULAR PROCESSES (POSSES-X00); 12 YONTHS \$188,000

# university of California, Ban Francisco

KUNTZ, IRWIN D; NMR SOLVENT EFFECTS AND INTERMOLECULAR INTERACTIONS (POSISOI); 24 MONTHS \$30,400

# UNIVERSITY OF CALIFORNIA, BANTA BARBARA

BOWERS, WICHAEL T; ION CYCLOTRON RESONANCE (POISSES DOI); 4 MONTHS \$6,700

# University of California, Santa Cruz

BERNASCONI, CLAUDE F; TEMPERATUREJUMP STUDIES OF MEISENHEIMER COMPLEXES AND RELATED INTERMEDIATES (P045501 X01); 12 MONTHS \$20,000

BUNNETT, JOSEPH F: THE CHEMISTRY OF AROMATIC COMPOUNDS (POSSESS X00): 12 MONTHS \$22,300

#### UNIVERSITY OF SOUTHERN CALIFORNIA

WILMARTH, WAYNE K; SUBSTITUTION REACTIONS OF OCTAHEDRAL COMPLEX IONS (POSTRIS XOI), 12 MONTHS \$40,600

BURG, ANTON B; FLUOROCARBON-PHOSPHINE DERIVATIVES (P017478 001); 24 MONTHS \$48,000

ADAMSON, ARTHUR W; PHOTOCHEMISTRY OF COORDINATION COM-POUNDS (PORTOL) X01); 12 MONTHS \$20,000

STEPHENS, PHILIP J; MAGNETIC CIRCULAR DICHROISM (POSOTOS); 24 MONTHS \$73,600

TAYLOR, HOWARD S; CALCULATION OF BOUND STATE PROPERTIES AND SCATTERING CROSS SECTIONS (POSOTIO X00); 12 MONTHS \$40,300

# University of California, ban diego-revelle college

SCHRAUZER, GERHARD N; STUDIES IN INORGANIC, ORGANIC AND BIOINORGANIC CHEMISTRY (POSSISS XOI); 12 MONTHS \$104,700

# COLORADO

# COLORADO STATE UNIVERSITY

SKOGERBOE, RODNEY K; SPECTROCHEMICAL APPLICATIONS OF LOW POWER MICROWAVE EXCITATION (POSISOS 001); 6 MONTHS \$5,000 OSTERYOUNG, R A, AND OSTERYOUNG, J; ANALYTICAL PULSE POLAROGRAPHY (POS1491 X00); 12 MONTHS \$42,700

MACIEL, GARY E; SOLVENT EFFECTS ON 13C CHEMICAL SHIFTS (POJ449); 24 MONTHS \$50,100

# UNIVERSITY OF COLORADO

KING, EDWARD L; COMPLEX IONS IN SOLUTION (POOTIES XOS); 12 MONTHS \$38,800

CRISTOL, STANLEY J; MECHANISMS OF CERTAIN ORGANIC REAC-TIONS (POSSEIS XOS); 12 MONTHS \$44,000

WILLIAMS, DENIS R; SYNTHETIC, PHYSICAL AND THEORETICAL CHEMISTRY OF ORGANOSULFUR COMPOUNDS (PO10950 001); 24 MONTHS \$22,900

DEPUY, CHARLES H; CYCLOPROPANE AND ORGANOMETALLIC CHEMISTRY (POISTS KOS); 12 MONTHS \$41,700
STRICKLER, STEWART J. AND LINEBERGER, W CARL; CONFERENCE

ON RADIATIONLESS PROCESSES IN GAS-PHASE MOLECULES (POSESTA); 12 MONTHS \$9,600

LINEBERGER, WILLIAM C; LASER STUDIES OF MOLECULAR ENER. GY TRANSFER PROCESSES (POSIGGE); 24 MONTHS \$37,000

SHAPIRO, ROBERT H, AND DEPUY, CHARLES H; GAS PHASE OR. GANIC CHEMISTRY IN A FLOWING AFTERGLOW SYSTEM (POSSETT); 12 MONTHS \$25,600

# UNIVERSITY OF DENVER

MAGEE, CHARLES B; TERNARY HYDRIDE SYSTEMS (P098600 X01): 12 MONTHS \$32,500

#### CONNECTICUT

### UNIVERSITY OF CONNECTICUT

STOCK, JOHN T. AND BOBBITT, JAMES M; ELECTROLYTIC OXIDATION OF NATURALLY OCCURING HETEROCYCLIC PHENOLS (POSOS74 X00); 18 MONTHS \$18,200

# YALE UNIVERSITY

BERSON, JEROME A; THERMAL REACTIONS (POLICET XOL): 12 MONTHS 130,000



CROSS, R JAMES JR; MOLECULAR SCATTERING (POSIGN 001); 24 MONTHB \$50,000

SHITH, ALLAN L; HOLECULAR IONIZATION (POLITIO 601); 14 MONTHS 864,500

Buith, Allan L; Molecular Ionization (Polysio Cos); \$5,800

Buplineras, raymond J; extensions of the kinematic model FOR CHEMICAL REACTION (POSSETS GOLD: 1 MONTHS \$2,800

BAUNDERS, MARTIN; RAPID REARRANGEMENT PROCESSES IN CAR-BONIUM IONS (PORGES 001); \$15,500

ZIEGLER, FREDERICK E; SYNTHESIS OF INDOLE ALKALOIDS OF BIOGENETIC AND CHEMOTHERAPEUTIC INTEREST (POSOSSO X00); 12 MONTHS \$29,900

WIBERG, KENNETH B: MECHANISMS OF OXIDATIVE PROCESSES (POSISSE X00); 12 MONTHS \$56,900

WIBERG, KENNETH B; SYNTHESIS AND PROPERTIES OF BICYCLIC AND TRICYCLIC SMALL RING COMPOUNDS (POSSETS XOOK 18 MONTHS 117,700

SCOTT, A 1; BIOGENETIC TYPE SYNTHESIS OF NATURAL PRODUCTS AND THEIR PROGENITORS (POSSSOS XOO): 12 MONTHS \$45,700

BERSON, JEROME A; THERMAL REACTIONS (POSSIOS X00), 12 MONTHS \$36,000

#### DELAWARE

# UNIVERSITY OF DELAWARE

MOORE, JAMES, SYNTHESIS AND REACTIONS OF NITROGEN-CON. TAINING BICYCLIC AND SEVEN-MEMBERED RING COMPOUNDS (PODSSS 001); 16 MONTHS \$6,800

WOOD, ROBERT H; THERMODYNAMICS OF SOLVENTS WITH HIGH DIBLECTRIC CONSTANTS (POLISES 601); 24 MONTHS \$44,900

VENANZI, LUIGI M; SQUARE PLANAR TRANSITION METAL COM-PLEXES (POJOSS X00); 12 MONTHS \$31,700

HOGGLE, JOSEPH H; AN EXPERIMENTAL STUDY OF NUCLEAR MAG-NETIC RELAXATION (POSSSEO); 24 MONTHS \$39,000

HECK, RICHARD F; SUBSTITUTION REACTIONS BY ORGANOTRANSI-TION METAL COMPOUNDS (POSILES XOC); 12 MONTHS \$45,000

#### DISTRICT OF COLUMNIA

# CATHOLIC UNIVERSITY OF AMERICA

CHIU, YING-NAN; ELECTRON SPIN-DEPENDENT RADIATION AND SPIN INTERACTION IN MOLECULES AND CRYSTALS (POINTS ON); 24 MONTHS \$28,500

BISCH, JOHN J; ATTACK AT UNSATURATED CARBON BY OR-GANOMETALLIC ELECTROPHILES AND PHOTO-EXCITED REAGENTS (P018909 X01); 5 MONTHS \$19,800

# GRORGETOWN UNIVERSITY

POPE, MICHAEL THOR; ELECTRONIC STRUCTURES OF HETEROPOLY ANIONS (P010338 001); 24 MONTHS \$35,500

HORAK, VACLAY; STRUCTURE AND REACTIVITY OF SULFUR HETEROAROMATICS (POID 119 001); T MONTHS \$17,700

DELEVIE, ROBERT; MEMBRANE ELECTRODE KINETICS (PORIPSA 001); \$11,000

EARLEY, JOSEPH E; UNUSUAL REDOX REACTIONS OF OXYIONS (Postisin 24 MONTHS \$67,400

# NATIONAL ACADEMY OF SCIENCES NATIONAL RESEARCH COUNCIL

PAUL, MARTIN A; TASK ORDER FOR A STUDY OF A NATIONAL LABORATORY FOR THEORETICAL CHEMISTRY (Calorei'); 12 MONTHS \$25,000

PAUL, MARTIN A; CONFERENCE ON COMPUTATIONAL NEEDS AND RESOURCES IN CRYSTALLOGRAPHY (CS10233); 12 HONTHS \$4,000

#### ROBIDA

### PLOBIDA STATE UNIVERSITY

HERZ, WERNER; STUDIES IN TERPENE CHEMISTRY (POISSE DOE): 24 MONTHS \$55,500

QUAGLIANO, JAMES V; COORDINATION COMPOUNDS CONTAINING POSITIVELY CHARGED LIGANDS (POSST 40 001); 12 MONTHS \$19,800

LEFFLER, JOHN E: THIRD CONFERENCE ON STRUCTURE-ENERGY RELATIONSHIPS (POJICES); 12 MONTHS \$5,000

DOUGHERTY, RALPH C; NEGATIVE CHEMICAL IONIZATION MASS SPECTROMETRY (POSTLES): 24 MONTHS \$39,000

# UNIVERSITY OF FLORIDA

VALA, MARTIN; SPECTROSCOPY OF CARBONYL COMPOUNDS (Polst40 001): 24 MONTHS \$38,800

BATES, ROGER G; SALT AND SOLVENT EFFECTS ON ANALYTICAL PROCESSES (POLISSE 001): 84 MONTHS \$56,200

LOWDIN, PER-OLOV, AND OHRN, YNGVE; QUANTUM CHEMISTRY OF ATOMS AND HOLECULES (POISSES COI); 24 MONTHS \$56,100

DEVRUP, JAMES A; EFFECTS OF UNSHARED ELECTRONS ON AD-JACENT REACTING GROUPS (POITE IF OOI); 24 MONTHS \$25,100

PERSON. WILLIS B; INFRARED INTENSITY STUDIES (POITEIS 001); 12 MONTHS \$25,700

DOLBIER, WILLIAM R JR; SIMULTANEITY OF CYCLOADDITIONS AND THERMAL REORGANIZATIONS (POSOSSE 001); 24 MONTHS \$26,100

JONES, WILLIAM M: CARBOCYCLIC AROMATIC CARBENES AND CAR-BENE-CARBENE REARRANGEMENTS (POSSESS XOI); 12 MONTHS \$60,800 MUSCHLITZ, E E JR; REACTIONS OF METASTABLE ATOMS AND MOLECULES (POSOS 48 XOO); 12 MONTHS 668,800

#### DNIVERSITY OF MIAMI

CRISS, CECIL M; THERMODYNAMIC PROPERTIES OF NONAQUEOUS olutions of electrolytes (polisition); 24 months \$41,900

# University of Bouth Plonida

STEVENS, BRIAN: KINETIC STUDIES OF PHOTOPEROXIDATION IN SOLUTION (POSSSS XOI): \$11,500

STEVENS, BRIAN; KINETIC STUDIES OF PHOTOPEROXIDATION IN SOLUTION (POSSIST XOS); 12 MONTHS \$23,900

BRAMAN, ROBERT S; SAMPLE-DETECTOR INTERFACING BY MEM. BRANES (POSISSO); 24 MONTHS \$21,400

#### UNIVERSITY OF PLORIDA-ENGINEERING & INDUSTRIAL EXPERIMENT STATION

URONE, PAUL: REACTIONS AND REACTION PRODUCTS OF SULFUR DIOXIDE IN AIR (POSISSE); 12 MONTHS \$28,800

# ALBANY STATE COLLEGE

PATTERSON, RUDY V; COSIP D RESEARCH INITIATION - THE CATA-LYTIC EFFECT OF TETRAALKYLAMMONIUM IONS ON THE ELECTRON TRANSFER BETWEEN POTASSIUM OCTACYANOTUNGSTATE (IV) AND POTASSIUM HEXACYANOFERRATE (III) (Y010[11]); 18 MONTHS \$24,400

STEELE, JACK: COSIP-D RESEARCH INITIATION . METAL-ENZYME COMPLEXES (Y010474); 18 MONTHS \$24,800

MCCRARY, THOMAS J; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y010473); 18 L'ONTHS \$24,900

MENGER, F M; (1) COMPUTER IDENTIFICATION OF PATHOGENIC BACTERIA (I) THE CHEMICAL DYNAMICS OF ORGANIC REACTIONS IN GELS (3) BILE SALTS AND THEIR COMPLEXES (POIIETS 001); 24 MONTHS \$20,000

DEMING, STANLEY N; AUTOMATED DEVELOPMENT OF ANALYTICAL CHEMICAL METHODS USING OPTIMIZATION TECHNIQUES (ADAM-O) POSESSIN 24 MONTHS \$33,000

## GEORGIA INSTITUTE OF TECHNOLOGY

LIOTTA, CHARLES L; MECHANISM OF TRANSMISSION OF NON-CON-JUGATIVE SUBSTITUENT EFFECTS (POI447 001); 24 MONTHS \$25,000

FELTON, RONALD H; THE ELECTRONIC STRUCTURE OF METAL-LOPORPHYRIN IONS (PO17061 001); 14 MONTHS \$43,000
ASHBY, E C; ORGANOMETALLIC COMPOUNDS. MECHANISMS AND

STEREOCHEMISTRY OF REACTION (POSISSO X00); 12 MONTHS \$31,800

GROVENSTEIN, ERLING JR; CHEMISTRY OF CARBANIONS (POSSSO) 200): 12 MONTHS \$28,000

FINK, RICHARD W; SEMICONDUCTOR ELECTRON AND X-RAY DE-TECTUR SYSTEM FOR FLUORESCENCE AND AUGER INVESTIGATIONS (P053584); 24 MONTHS \$25,000

## MOREHOUSE COLLEGE

MCBAY, HENRY C; BLACK COLLEGES (FOUR-YEAR) (Y010448); 89 MONTHS 274 300

ANDERSON, GLORIA L: 19F CHEMICAL SHIFTS AND INFRARED C-F STRETCHING FREQUENCIES FOR BRIDGEHEAD FLUORIDES (POJAISO), 24 MONTHS \$66,500

# UNIVERSITY OF GEORGIA

ALLINGER, NORMAN L: CONFORMATIONAL TRANSMISSION (POISSES 001): 24 MONTHS \$44.200

HILL, RICHARD K; STEREOCHEMISTRY OF THERMAL REORGANIZA-TION REACTIONS (POSSOSS XOI); 12 MONTHS \$21,400

CARST, JOHN F: MECHANISMS AND REACTIVITY IN ELECTRON TRANSFER AND RELATED REACTIONS (POSSIST X01); 12 MONTHS \$22,000 KING, R BRUCE; TRANSITION METAL ORGANOMETALLIC CHEMIS-TRY (POSISIT X00); 12 MONTHS \$23,500

KING, R BRUCE; TRANSITION METAL ORGANOMETALLIC CHEMIS-TRY (POSIS47 X01); \$30,000

HERCULES, DAVID M; ANALYTICAL APPLICATIONS OF BLECTRON SPECTROSCOPY (POSEMS X00); 12 MONTHS \$47,100

STORY, PAUL R; MECHANISMS OF OZONOLYSIS (POSISM X00); 12 MONTHS \$31,700

SMITH, DARWIN W; DENSITY MATRIX APPROACH TO ATOMIC STRUCTURE (FOSILIST XOO), 12 MONTHS \$24,000

#### HAWAH

# UNIVERSITY OF HAWAII

ANDERMANN, GEORGE; DEVELOPMENT OF X-RAY SPECTROSCOPIC METHODS (PO06566 001); 12 MONTHS \$16,000

HUBBARD, A T; STRUCTURE AND INFLUENCE OF THE DOUBLE LAYER AT SOLID ELECTRODES (POINTAT 001); 24 MONTHS \$62,000



ANDERMANN, GEORGE: INFRARED OPTICAL PROPERTIES OF CRYSTALS (POSSESS), 24 MONTHS \$35,000

#### IDAHO

#### UNIVERSITY OF IDAHO

SHREEVE, JEAN'NE M; NONMETALLIC INORGANIC AZIDES AND SOME MODEL REACTION SYSTEMS (POIRELT 001); PA MONTHS \$53,800 NELSON, ROBERT F; PREMEDITATED ELECTROSYNTHESIS (POSITIOS): 12 MONTHS \$14,800

#### IWNOIS

# ILLINOIS INSTITUTE OF TECHNOLOGY

LARSEN, RUSSELL D; STATISTICAL SPECTRAL ANALYSIS OF CHEMI-CALLY-RELATED TIME SERIES (POI6760 001); 6 MONTHS \$5,000 GUTMAN, DAVID, DYNAMICS OF FREE RADICAL REACTIONS (POSSISS

X00); 12 MONTHS \$36,200

# NORTHWESTERN UNIVERSITY

FROST, ARTHUR; ELECTRONIC ENERGY OF SMALL MOLECULES (P018858 001); 24 MONTHS \$43,106

BASOLO, FRED, METAL NITRENE CHEMISTRY AND METAL COM-PLEXES OF MOLECULAR NITROGEN (PORTAGE XOI); 12 MONTHS \$36,800 SMITH, DONALD E: VOLTAMMETRY WITH VARYING POTENTIALS (Poss748 X01); 12 MONTHS \$41,500

BORDWELL, FREDERICK G; THE FORMATION AND REACTIONS OF CARBANIONS (POSSESS X01); 12 MONTHS \$73,700

MARKS, TOBIN J; CHEMICAL AND SPECTROSCOPIC STUDIES OF OR-GANOACTINIDES (POSOSSI X00): 12 MONTHS \$17,900

MARKS, TOBIN J, CHEMICAL AND SPECTROSCOPIC STUDIES OF OR-GANGACTINIDES (POIOLES XOI); \$4,100

PEARSON, RALPH G; ORBITAL SYMMETRY AND THE MECHANISMS OF INORGANIC REACTIONS (POJIO60 X00): 12 MONTHS \$52,500

VAN DUYNE, RICHARD P; TIME-CORRELATED SINGLE-PHOTON COUNTING IN ELECTROCHEMILUMINESCENCE AND ANALYSIS (POJ2933); 24 MONTHS \$47,100

MARSHALL, JAMES A; NEW SYNTHETIC APPROACHES TO CARBO CYCLIC COMPOUNDS (POSSETS X00), 12 MONTHS \$40,900

STAFFORD, FRED E: THERMODYNAMIC PROPERTIES OF SMALL IN-ORGANIC MOLECULES (POSSSES): 12 MONTHS \$26,000

ALLRED, A LOUIS; TRIPOSITIVE ZINC, CADMIUM, AND MERCUPY (P0JJ5J0); 24 MONTHS \$39,500

LAMBERT, JOSEPH B; BONDING IN ORGANIC AND ORGANOMETALLIC MOLECULES (POS1258 X00), 12 MONTHS \$25,000

# UNIVERSITY OF CHICAGO

HOLZWARTH, GEORGE M; THE MEASUREMENT OF OPTICAL ACTIVI-TY ARISING FROM VIBRATIONAL TRANSITIONS IN MOLECULES (P008568 001); 24 MONTHS \$60,000

CLOSS, GERRARD L: SMALL RING COMPOUNDS (POINTIN XOI), 12 MONTHS \$46,700

HALPERN, JACK: MECHANISMS OF INORGANIC REACTIONS (PO26600 X01): 12 MONTHS \$67,800

STOCK, LEON M; CHEMICAL APPLICATIONS OF ELECTRON PARAMAGNETIC RESONANCE (POSSS74 XOI); 12 HOWTHS ME, IW

EATON, PHILIP E; SYNTHESIS AND CHEMISTRY OF STRAINED POLY. CYCLIC SYSTEMS (POJOS68 X00); 12 MONTHS \$61,800

KLEPPA, OLE I; THERMODYNAMIC PROPERTIES OF FUSED SALT MIXTURES (POJOS 47 X00); 12 MONTHS \$35,100

HUTCHISON, CLYDE A JR; MAGNETIC RESONANCE INVESTIGATIONS OF ORGANIC MOLECULES IN TRIPLET STATES (POSMOS), 24 MONTHS 1220,000

LEVY, DONALD H; RADIO FREQUENCY SPECTROSCOPY OF EXCITED STATES AND SHORT-LIVED SPECIES (POSIOI) X00), 12 MONTHS \$46,000

YANG, N C; PHOTOCHEMISTRY OF ORGANIC COMPOUND POSSESS X00); 12 MONTHS \$64,000

GOMER, ROBERT, FIELD EMISSION AND ADSORPTION STITUTES (Poles & X00); 12 MONTHS \$75,600

RICE, STUART A; EXPERIMENTAL AND THEORETICAL STUDIES OF LIQUIES, SURFACES AND CHEMICAL CONTROL MECHANISMS (POSITIO X00); 12 MONTHS \$86,100

LIGHT, JOHN C; THEORETICAL CHEMISTRY (Possess X00), 12 MONTHS \$97,500

HINZE, JUERGEN, QUANTUM MECHANICAL STUDIES OF MOLECU-LAR STRUCTURE (POSSESS X00); 12 MONTHS \$45,900

RLUGER, RONALD H; MODELS FOR THE BIOCHEMICAL UTILIZATION OF ANHYDRIDES (POSISSE XOO): 12 MONTHS \$13,200

# UNIVERSITY OF ILLINOIS AT CHICAGO CIRCLE

CARLIN, RICHARD L; MAGNETISM AND MAGNETIC TRANSITIONS (POIS106 001); 24 MONTHS \$50,800

CHURCHILL, MELYYN, STRUCTURAL STUDIES IN TRANSITION-METAL CHEMISTRY (POSSOIS): 24 MONTHS 443,000

BOYER, JOSEPH H; ORGANIC CYANIDES AND ISOCYANIDES (POSSETS X00), 12 MONTHS \$47,100

WALTER, ROBERT I; SUBSTITUTION EFFECTS ON PROPERTIES OF STABLE FREE RADICALS (POSSS X00); 12 MONTHS \$21,600

Burns, Richard P; Molecular Beam-Surface interactions --HIGH TEMPERATURE CHEMISTRY (POSISSO); 24 MONTHS \$45,000

#### university of illinois at urbana

LEONARD, NELSON J; STRUCTURAL HTUDIES ON MEDIUM. AND SMALL-RING COMPOUNDS (POSSIOT XOS); IS MONTHS \$50,200

FLYGARE, W H; HIGH RESOLUTION MICROWAVE SPECTROSCOPY (POISSE XOS); 12 MONTHS \$67,000

MARTIN, JAMES C; ORGANIC CHEMISTRY (POISSSI 001); \$3,500

SECREST, DON; COMPUTER STUDIES OF INELASTIC COLLISIONS (P016458 001): 24 MONTHS \$30,000

YARDLEY, JAMES T; MOLECULAR ENERGY TRANSFER AND EXCITED STATE DYNAMICS (PO19068 00%), 12 MONTHS \$23,400

JONAS, JIRI: NUCLEAR MAGNETIC RESONANCE STUDY OF RELAXA-TION PHENOMENA (POSSSES XOI); 12 MONTHS \$37,400

BROWN, THEODORE L; ORGANOME!'ALLIC CHEMISTRY (POJORSO X00); 12 MONTHS \$57,200

MARTIN, JAMES C; REACTIVE INTERMEDIATES USEFUL IN SYNTHE. SIS (POJO491 X00); 12 MONTHS \$47,700

LOMBARDI, JOHN R; HIGH RESOLUTION ELECTRONIC SPECTROSCO-PY (POJ0709 X00); 12 MONTHS \$32,100

STUCKY, GALEN D; STRUCTURAL PROPERTIES OF GROUP I, II, AND III ORGANOMETALLIC COMPOUNDS (POSICIO XOO); 12 MONTHS \$25,800

DRAGO, RUSSELL S; LEWIS ACID BASE INTERACTIONS (POS'HI X00); 12 MONTHS \$42,500 WEBER, GREGORIO, DETERMINATION OF VERY SMALL DISSOCIA-

TION CONSTANTS OF PROTEIN COMPLEXES (POSITIO): 24 MONTHS \$50,000 MCDONALD, J D; INFRARED CHEMILUMINESCENCE STUDIES OF

THE DYNAMICS OF REACTIONS OF GASES (POSITES X00): 12 MONTHS \$90,300 LAITINEN, H A; SURFACE EFFECTS IN BLECTROANALYTICAL

CHEMISTRY (POSSEST XOO); 12 MONTHS \$22,000 EVANS, CHARLES A JR; ION MICROPROBE MASS SPECTROMETRY

(PAJJ27J); 24 MONTHS \$50,000 MARCUS, RUDOLPH A; THEORY OF CHEMICAL KINETICS (Posisis

X00); 12 MONTHS \$40,000 HAIGHT, GILBERT P JR; METAL IONS IN ENZYME AND MODEL EN-

ZYME SYSTEMS (POJJSJ7); 24 MONTHS \$39,800 SNYDER, H R; AROMATIC AND HETEROCYCLIC SYNTHESIS 'VIA'

COMPLEXES FORMED IN DIPOLAR APROTIC SOLVENTS FROM ANIONS AND AROMATIC AND HETEROCYCLIC SUBSTANCES (POSIDE X00); 12 MONTHS \$29,600

ECKERT, CHARLES A; DIPOLAR TRANSITION STATES-STRUCTURE AND PROPERTIES FROM HIGH PRESSURE KINETICS (POSITIOS X00); 12 MONTHS \$26,000

BEAK, PETER A: CHEMICAL STRUCTURE AND STABILITY (PONES) X00), 12 MONTHS \$25,000

CURTIN, DAVID Y; SOLID STATE ORGANIC CHEMISTRY (POSISIS X00); 12 MONTHS \$25,000

# INDIANA

# INDIANA UNIVERSITY, BLOOMINGTON

KOCHI, JAY K; OXIDATION AND REDUCTION OF ORGANIC COM-POUNDS BY METAL SPECIES (POISELS XOI); 12 MONTHS \$58,000

ALLERHAND, ADAM; APPLICATIONS OF NATURAL-ABUNDANCE CARBON II FOURIER TRANSFORM NUCLEAR MAGNETIC RESONANCE (P017868 001); 24 MONTHS \$56,000

SCHAEFFER, RILEY; COVALENT INORGANIC COMPOUNDS IPOSARSS X011, 12 MONTHS \$61,000

WENTWORTH, R A D. BONDING IN DIMERIC METAL COMPLEXES (POJOS 14 X00); 12 MONTHS \$22,100

WENKERT, ERNEST; CHEMISTRY OF TERPENIC NATURAL

PRODUCTS (POSTORO XOO): 12 MONTHS \$34,100
SHINER, V J JR; DEUTERIUM ISOTOPE EFFECTS AND THE MECHANISMS OF NUCLEOPHILIC SUBSTITUTION (POSSESS X00): 12 MONTHS \$43,900

TODD, LEE J; HETEROATOM-BORANES (POISSET XOC); 12 MONTHS 130,000

NOVOTNY, MILOS V; CHROMATOGRAPHIC ANALYSIS OF AROMATIC HYDROCARBONS IN AIR-BORNE PARTICULATES (POSSYSS), 24 MONTHS \$34,000

SHULL, HARRISON, AND HAGSTROM, STANLEY A; THEORETICAL AND COMPUTATIONAL STUDIES OF ATOMIC AND MOLECULAR STRUC-FURE (POSSESS XOO); 12 MONTHS \$114,200

SNEEN, RICHARD A; NUCLEOPHILIC SUBSTITUTION AT A SATU-RATED CARBON ATOM (POIOS IN XOI); 12 MONTHS \$30,700

MORRISON, HARRY A; PHOTOCHEMISTRY OF BICHROMOPHOBIC MOLECULES (P012650 001); 24 MONTHS \$40,000

MARGERUM, DALE W: VERY FAST SUBSTITUTION REACTIONS OF METAL COMPLEXES (POLITEL XOR); 12 MONTHS \$35,000

DIESTLER, DENNIS J; THEORETICAL CALCULATIONS ON INELASTIC AND REACTIVE MOLECULAR COLLISIONS IN GASES (PO11957 DOI); 24 MONTHS \$30,200



ROBINSON, WILLIAM R; ORGANOMETALLIC DERIVATIVES OF TRANSITION METAL NITROSYLS (POINTL 001); 24 MONTHS \$27,700

WALTON, RICHARD A; TRANSITION METAL HALIDES, CARBOXY-LATES AND RELATED DERIVATIVES (POISIS 501): 34 MONTHS \$48,900 TOBIAS, R STUART; METHYL DERIVATIVES OF HEAVY METALS (POISISS 501); 13 MONTHS \$82,700

LYTLE, F E; CHEMICAL APPLICATIONS OF ULTRASHORT DURATION LIGHT PULSES (POSSISS 001); \$2,000

COBBLE, JAMES W; STUDIES IN AQUEOUS SOLUTIONS AT HIGHER TEMPERATURES (POILEGE 001); 12 MONTHS \$20,000

BROWN, HERBERT C; NEW CHEMISTRY OF ORGANOBORANES (POSTILE XOI); 12 MONTHS \$31,500

EDGELL, WALTER F; INFRARED AND RAMAN SPECTRA OF SALT SOLUTIONS AND THEIR LOW TEMPERATURE GLASSES (PO27018 XOI): 12

BROWN, HERBERT C: QUANTITATIVE STUDIES OF STRUCTURE AND REACTIVITY (POSISES): 14 MONTHS \$60,900

BEYNON, JOHN H; THE DESIGN, CONSTRUCTION AND UTILIZATION OF AN ION KINETIC ENERGY SPECTROMETER FOR THE STUDY OF GASEOUS IONS (POSSIE); 24 MONTHS \$100,000

GRINLEY, ROBERT T; THERMODYNAMICS AND KINETICS OF VAPORIZATION PROCESSES (POSSISS): 12 MONTHS 426,800

BENKESSER, ROBERT A: STRUCTURE AND CHEMISTRY OF CROTYL-TYPE ORGANOMETALLICS (POSSESS): 24 MONTHS \$31,000

#### UNIVERSITY OF NOTRE DAME

PREEMAN, JEREMIAH P; STERBOSELECTIVE H-D EXCHANGES IN ORGANOSULFUR COMPOUNDS (POJONI); 12 MONTHS \$14,800

INDIANA UNIVERSITY, INDIANAPOLIS-SCHOOL OF MEDICINE

ROESKE, ROGER W; SYNTHESIS OF ENZYME MODELS (POSISES); 24 MONTHS \$48,500

#### **IOWA**

# GRINNELL COLLEGE

ERICKSON, LUTHER 5; METAL CHELATES (POISSES COI): 12 MONTHS

### IOWA STATE UNIVERSITY OF SCIENCE & TECHNOLOGY

RUSSELL, GLEN A; RADICAL IONS (POIJS IS 001); 24 MONTHS \$75,300 TRAHANGVSKY, WALTER S; OXIDATION AND REDUCTION OF OR-GANIC COMPOUNDS (POISO) 1001); 24 MONTHS \$35,000

JOHNSON, DENNIS C: ELECTROCHEMICAL STUDY OF PHOTOCHEMI-CAL OXIDATIONS AND REDUCTIONS (POISSIS 001); 12 MONTHS \$16,800 CHAPMAN, ORVILLE L; META-STABLE GROUND STATE INTER-

MEDIATES IN PHOTOCHEMISTRY (POSSISS XOI): 12 MONTHS \$28,000 ESPENSON, J H; REACTIONS AND REACTION MECHANISMS OF

MACROCYCLIC COBALT CONPLEXES (POJJESS); 24 MONTHS \$30,600
CALDER, G V, FRITZ, J S, AND SVEC, H J; CHEMICAL ANALYSIS OF
SOLUBLE TRACE ORGANIC COMPOUNDS (POJJESE X00); 12 MONTHS

\$81,200
VERKADE, JOHN G: BIOLOGICALLY ACTIVE ORGANOPHOSPHORUS
COMPOUNDS AND METALLOPHOSPHORUS HYDROGENATION

CATALYSTS (PGJ473 X00): 12 MONTHS \$37,400
GILMAN, HENRY; PERFLUOROALKYL-METALLIC COMPOUNDS (PGJ453); 12 MONTHS \$38,600

## UNIVERSITY OF IOWA

CATER, E DAVID; HIGH TEMPERATURE CHEMISTRY OF REFRACTO-RY SOLIDS (2014):11: 12 MONTHS \$21,400

#### KANSAS

### KANSAS STATE UNIVERSITY

SCHRENK, WILLIAM G; ELECTRODELESS DISCHARGE LAMPS IN ATOMIC ABSORPTION SPECTRUSCOPY (Poopset ool); 24 MONTHS \$21,800 MCDONALD, RICHARD N; STRAINED FUSED RING SYSTEMS (POIOSE) OOl); 24 MONTHS \$44,600

COPELAND, JAMES L: TRANSPORT AND HIGH PRESSURE GAS PHENOMENA IN MOLTEN SALTS (POINOR DOI): 24 MONTHS \$35,400 SSIB, PAUL A; ACID-CATALYZED HYDROLYSIS OF PYRANOSIDES

(P033348); 24 MONTHS \$24,300

# UNIVERSITY OF KANSAS

HARMONY, MARLIN D; MICROWAYE SPECTROSCOPIC STUDIES OF NITROGEN-CONTAINING MOLECULES (POISIE? 901): 24 MONTHS \$37,500 CHRISTOFFERSEN, RALPH E; 'AB INITIO' STUDIES OF MOLECULAR SYSTEMS (POISIE) X00): 12 MONTHS \$19,100

ADAMS, RALPH N; ANODIC OXIDATION AND ANALYSIS WITH OR-GANIC SYSTEMS (POSESSE XOO); 12 MONTHS \$41,400

#### KENTUCKY

# LINIVERSITY OF KENTUCKY

GUTHRIE, ROBERT D; ELECTRON TRANSFER STUDIES OF CAR-BANIONS AND RELATED SYSTEMS (POT745 001); 24 MONTHS \$31,000 HOFSTETTER, KENNETH J; PROTON EXCITED X-RAY FLUORESCENCE (POSSTSI); 12 MONTHS \$26,000

#### LOUISIANA

# LOUISIANA STATE UNIVERSITY, BATON ROUGE

WEST, PHILIP W; SELECTIVE AND SENSITIVE METHODS FOR THE DETERMINATION OF SULFURIC ACID AEROSOLS (POINGE 601); MINONTHS MI,000

SELBIN, JOEL; URANIUM COMPLEX CHEMISTRY (POJOSSI X00); 18 MONTHS \$22,900

RUNNELS, L K; DENSE FLUIDS AND PHASE TRANSITIONS (POSSESS X00); 12 MONTHS \$17,700

CARTLEDGE, FRANK K; KINETIC STUDIES OF ORGANOSILANES (POIJ871 X00); 12 MONTHS \$22,000

# LOUISIANA STATE UNIVERSITY, NEW ORLEANS

DAVIS, DONALD O; ELECTRON TRANSFER RATES OF METAL-LOPORPHYRINS (PO19719 001); \$20,000

DAYIS, DONALD G: ELECTRON TRANSFER RATES OF METAL-LOPORPHYRINS (POLOTIC COR); 24 MONTHS \$40,000

KERN, RALPH D JR; EXCHANGE REACTIONS USING THE SHOCK TUBE TECHNIQUE (POSSIST COI); \$5,900

GOOD, MARY L; RUTHENIUM MOSSBAUER STUDIES (POSSIS 001); \$2,500

GUILBAULT, GEGRGE G; ENZYME ELECTRODE PROBES (POJISIS); 24 MONTHS \$29,900

KERN, RALPH D JR; EXCHANGE REACTIONS USING THE COMPLE-MENTARY SHOCK TUBE TECHNIQUE (POSSES X00); 18 MONTHS \$18,100

#### SOUTHERN UNIVERSITY

BURSH, TALMAGE P; URANIUM OXIDE-WATER INTERACTIONS (POSIISS); 18 MONTHS \$17,000

SMITH, CLIFFORD L; (YOIO455); 24 MONTHS \$16,800

#### XAVIER UNIVERSITY OF LOUISIANA

MALMSTROM, SR MARY CARL; BLACK COLLEGES (FOUR-YEAR) (Y010414); 24 MONTHS \$17,800

SOUTHERN UNIVERSITY-SOUTGERN UNIVERSITY IN NEW ORLEANS
MAJESTE, RICHARD JOHN; MOLECULAR STRUCTURE OF HEXAHALO
COMPLEXES OF THE LANTHANIDES (POSISSE); 42 MONTHS \$27,800

# MAINE

#### BOWDOIN COLLEGE

ANDERSON, GEORGE R; COLLABORATIVE RESEARCH ON VIBRONIC EFFECTS IN HYDROGEN BONDING (POSITES); 24 MONTHS \$36,000

## UNIVERSITY OF MAINE, ORONO

GOODFRIEND, PAUL L; FLASH PHOTOLYSIS KINETIC SPECTROSCOPY INVESTIGATION OF MOLECULAR FRAGMENTS FROM PF CONTAINING COMPOUNDS (PO18259 001): 12 MONTHS \$14,500

WEAVER, DAVID L; STRUCTURE AND BONDING IN TRANSITION METAL NITROSYL COMPLEXES (POJOSSE) 24 MONTHS \$34,700

# MARYLAND

# JOHNS HOPKINS UNIVERSITY

WHITE, EMIL H; DEAMINATION OF ALIPHATIC AMINES (POOS994 XOS); 12 MONTHS \$41,000

NICKON, ALEX; MECHANISM AND STEREOCHEMISTRY IN IONIC REACTIONS (POLISIS XOS); 12 MONTHS \$33,000

DOERING, JOHN P; LOW ENERGY CHARGED PARTICLE SPECTROSCO-PY (Postobo Xoo): 12 MONTHS \$29,000

PERLSTEIN, JEROME H: ELECTRON TRANSPORT IN MIXED VALENCE COMPLEXES-MODELS FOR HIGH TEMPERATURE SUPER-CONDUCTORS (POSISIT); 24 MONTHS \$36,000

POSNER, G H; SCOPE AND LIMITATIONS OF ORGANOCOPPER RE-AGENTS IN SYNTHESIS (POSISEN); 24 MONTHS \$31,600

KOKES, RICHARD J; HYDROGENATION AND ISOMERIZATION OF OLEFINS OYER SOLID CATALYSTS (POSIGN) X00); 12 MONTHS \$35,000

COWAN, DWAINE O; HEAVY ATOM AND OTHEK EFFECTS IN OR-GANIC PHOTOCHEMISTRY (POLUGE X00), 12 MONTHS \$20,100

# UNIVERSITY OF MARYLAND, BALTIMORE COUNTY

VITULLO, VICTOR P; ACIDITY DEPENDENCE OF A-1 AND A-2 REACTIONS (Possiss XoI): 12 MONTHS \$13,000

# UNIVERSITY OF MARYLAND, COLLEGE PARK

BAILEY, WILLIAM J; FORMATION OF REACTIVE DOUBLE BONDS (POISSE 901): 24 MONTHS \$19,800

STALEY, STUART W; HYDROCARBON ANIONS (POI7889 001); 24 MONTHS \$50,000

MOORE, JOHN H JR; ELECTRONIC EXCITATION IN COLLISIONS BETWEEN HEAVY PARTICLES AND SMALL MOLECULES (POIDIT) 001); 24 MONTHS \$34,900

GRIM, SAMUEL O: PHOSPHORUS COORDINATION COMPOUNDS (POSO703); 24 MONTHS \$36,400

LIPPINCOTT, ELLIS R; COLLABORATIVE RESEARCH ON VIBRONIC EFFECTS IN HYDROGEN BONDING (POSICIA); 24 MONTHS \$69,000



#### MASSACHUSETTS

BOSTON UNIVERSITY

HOFFMAN, MORTON 2; PHOTO AND RADIATION CHEMISTRY OF COORDINATION COMPLEXES (POITETS 601); 24 MONTHS \$40,100

BRANDER UNIVERSITY

HENDRICKSON, JAMES B; OXIDATIVE COUPLING IN SYNTHESIS (POSSESS X01); 12 MONTHS \$30,000

ROSENBLUM, MYRON; CYCLOBUTADIENE AND OLEFIN . METAL COMPLEXES (PO\$7991 XOI); 12 MONTHS \$30,100

GRUNWALD, BRNEST; SOLVATION OF POLAR SOLUTES AND THE STRUCTURE AND REACTIVITY OF ION PAIRS (POSOSTE X00); 12 MONTHS

DORAIN, PAUL B; MAGNETIC AND OPTICAL PROPERTIES OF TRANSITION METAL IONS IN CRYSTALS (POSISIL X00), 12 MONTHS

Cohen, saul G; photochemistry and the chemistry of free RADICALS (POIS LIS X90); 12 MONTHS \$22,500

WEN, WEN-YANG; THERMODYNAMIC PROPERTIES OF LARGE IONS IN SOLUTIONS (POSSETO 001); 24 MONTHS \$40,000

# HARVARD UNIVERSITY

KISTIAKOWSKY, Q B; GAS PHASE REACTIONS (POOLIGE XOL); \$3,000 KARPLUS, MARTIN; PROBLEMS IN THEORETICAL CHEMISTRY (P007907 X03); 12 MONTHS \$107,200

BARTLETT, PAUL D. MECHANISMS OF GRGANIC REACTIONS (POORBOS X65): 12 MONTHS \$39,500

CORBY, ELIAS J; ORGANIC CHEMISTRY- (A) CYCLIC STRUCTURES IN-CLUDING TERPENES, (B) ORGANOMETALLIC CHEMISTRY, (C) PHOTOCHEMISTRY, (D) SYNTHETIC METHODOLOGY (POISSE XOS); 12 MONTHS \$106,000

WILSON, E BRIGHT JR; MOLECULAR SPECTROSCOPY AND PURE QUANTUM MECHANICAL THEORY (POI 4018 XOJ); 12 MONTHS \$50,500

WILLIAM VON E: METHYLENECYCLOPROPANE AND RELATED REARRANGEMENTS
(P918818 X01), 12 MONTHS \$31,600
HERSCHBACH, DUDLEY R; MOLECULAR MECHANICS OF CHEMICAL HECHANISM

REACTIONS (PORTER XOI); 12 MONTHS \$137,300

GORDON, ROY G; INTERMOLECULAR FORCES AND MOLECULAR MO-TION (POSS176 XO1); 12 MONTHS \$79,700

WESTHEIMER, P H; THE CHEMISTRY OF PHOSPHATE ESTERS AND RELATED COMPOUNDS (POSOSES XOO); 12 MONTHS \$44,100

KOHLER, BRYAN E; MAGNETIC ROTATION SPECTROSCOPY IN SIN-GLE CRYSTALS (PGJ2216); 24 MONTHS \$54,800

KLEMPERER, WILLIAM; MOLECULAR STRUCTURE AND MOLECULAR COLLISIONS OF EXCITED ELECTRONIC STATES (POSJIT) X00); 12 MONTHS \$115,000

DOLPHIN, DAVID H; STUDIES IN PYRROLE CHEMISTRY (POSSES X00); 12 MONTHS \$26,400

REINHARDT, WILLIAM P: THEORY OF HANY-BODY PROCESSES IN CHEMICAL PHYSICS (POSSESS); 24 MONTHS (35,600

# MASSACHUSETTS INSTITUTE OF TECHNOLOGY

COTTON, F A: INORGANIC AND ORGANOMETALLIC CHEMISTRY (P00703 | X04); \$26,000

DUBRIN, JAMES W: PRIMARY REACTION MODES OF INTERNALLY AND TRANSLATIONALLY EXCITED HYDROGEN ATOMS (PO13277 001); 2A MONTHS \$34,800

LORD, RICHARD C; METHODS AND APPLICATIONS OF FAR IN-FRARED SPECTROSCOPY (Polsats Xos); 2 MONTHS \$9,800

SWAIN, C GARDNER; EFFECT OF STRUCTURAL CHANGES IN REAC-TANTS ON THE STRUCTURE OF TRANSITION STATES (POLICES 001); 7 MONTHS \$10,000

HOLM, RICHARD H; TRANSITION METAL CHEMISTRY (POISS78 XO2); 12 MONTHS \$64,100

KUKOLICH, STEPHEN G; MEASUREMENTS OF THE MOLECULAR ZEEMAN EFFECT AND MOLECULAR HYPERFINE STRUCTURE USING BEAM MASER SPECTROSCOPY (PORITIO 001); 24 MONTHS \$37,300

Kinsey, James L, Oppenheim, I, Ross, John, and Waugh, John S; INTERMOLECULAR FORCES (POISING XOI): 12 MONTHS \$335,000

LAGOW, RICHARD J; NEW INORGANIC FLUORIDES BY DIRECT FLUORINATION (POSO 18 | X00), 12 MONTHS \$18,500

SHARPLESS, K BARRY; OXOTRANSITION METAL SPECIES AND THEIR RELEVANCE TO MIXED FUNCTION OXYGENASES (POSOUS XOO); 12 MONTHS \$19,700

SEYFERTH, DIETMAR, ORGANOMETALLIC SYNTHESIS AND REAC. TIONS (POST 489 X00); 12 MONTHS \$42,700

DEUTCH, JOHN M; STATISTICAL MECHANICAL INVESTIGATIONS (Parisso X00): 12 MONTHS \$36,000

APPLETON, JOHN P. AND KECK, JAMES C: THERMALLY INDUCED THREE-BODY GAS-PHASE REACTIONS (POSESSE XOO); 12 MONTHS \$49,500 KEMP, D S; SYNTHESIS AND STUDY OF CAGED COMPOUNDS (POSSESS

X00); 12 MONTHS \$37,800 SILBEY, ROBERT J; QUANTUM MECHANICAL STUDIES OF THE COUPLING OF ELECTRONIC AND VIBRATIONAL MODES IN MOLECULES AND MOLECULAR CRYSTALS (POSSET X00); IS MONTHS \$21,800

SEYFERTH, DIETMAR; GROUP III AND V CHEMISTRY (PONSSIO); 24 MONTHS \$39,000

HUME, DAVID N; ANALYTICAL METHODOLOGY FOR ENVIRONMEN-TAL MEASUREMENTS (POSSESO): 18 MONTHS \$50,000

# MOUNT HOLYOKE COLLEGE

WILLIAMSON, KENNETH L; CONFORMATIONAL ANALYSIS BY NMR (P090449); 12 MONTHS \$11,100

#### TUPTS UNIVERSITY

DEWALD, ROBERT R; RATES OF ELECTRON-REDUCTION REACTIONS IN LIQUID AMMONIA (POROCOS COI); 24 MONTHS \$48,200

# University of massachusetts, amherst

ROWELL, ROBERT L; COLLOID AND MOLECULAR LIGHT SCATTER-ING (PO14110 001); 24 MONTHS \$42,700

CADE, PAUL E; THEORETICAL STUDIES ON THE COMPTON PROFILE SCATTERING FACTORS AND MOMENTUM-SPACE QUANTUM CHEMIS-TRY (POI MOD COIL) 24 MONTHS \$31,800
CHIEN, JAMES C W; AUTOXIDATION OF POLYMERS . MEASURE.

MENTS OF INDIVIDUAL RATE CONSTANTS (POMISS X00): 12 MONTHS \$18,500

UDEN, PETER C; PREPARATION AND ANALYTICAL APPLICATION OF VOLATILE METAL COMPLEXES (POSITIO), 24 MONTHS \$30,000

# worcester polytechnic institute

BUSHWELLER, C HACKETT; MULTIHETEROATOMIC MEDIUM RINGS AND THE VARIOUS ROLES OF THE LONE PAIR (POISIST 001); 8 MONTHS \$6,000

#### MICHIGAN

# MICHIGAN STATE UNIVERSITY

HART, HAROLD; CHEMISTRY OF SOME HIGHLY SUBSTITUTED COM-POUNDS (POGETED XOJ); 12 MONTHS \$57,600 HORNE, FREDERICK H; NONISOTHERMAL TRANSPORT IN MUL-

TICOMPONENT SYSTEMS (POITIED DOS), 24 MONTHS \$49,000

BRUBAKER, CARL H JR; ORGANOMETALLIC COMPOUNDS OF TRANSITION ELEMENTS (POITLES XOS); 12 MONTHS \$32,400 CROUCH, STANLEY R; FAST KINETIC STUDIES OF ANALYTICAL

SYSTEMS (POISIES 001); 24 MONTHS \$50,000 WAGNER, PETER J; STRUCTURE-REACTIVITY RELATIONSHIPS IN

KETONE PHOTOCHEMISTRY (POISSO COI); 12 MONTHS \$31,000 SCHWENDEMAN, BICHARD H; MOLECULAR STRUCTURE AND ROTA-TIONAL RELAXATION BY MICROWAVE SPECTROSCOPY (POROSES 001); 4 MONTHS \$10,200

POPOV, ALEXANDER 1: THIRD INTERNATIONAL CONFERENCE ON NONAQUEOUS SOLVENTS (POSITIE); 12 MONTHS \$4,000

LEROI, GEORGE E; SPECTROSCOPIC STUDIES OF SMALL. MOLECULES (POSSESS X00); 12 MONTHS \$78,000

ROGERS, MAX T; ESR STUDIES OF CHEMICAL BONDING IN TRANSI-TION METAL COMPLEXES (POSSESS), 24 MONTHS \$39,500

MORTLAND, M M, AND PINNAVAIA, THOMAS J; CHEMISORBED SPE-CIES ON TRANSITION METAL ION EXCHANGE FORMS OF CLAY MINERALS (POSSA78); 24 MONTHS \$80,000

LEROI, GEORGE E; CONFERENCE ON FUTURE TRENDS IN VIBRA-TIONAL SPECTROSCOPY (POS 1008); 6 MONTHS \$5,000

RATHKE, MICHAEL WILLIAM; BORON-STABILIZED CARBANIONS (POS 1984); 24 MONTHS \$27,200

# UNIVERSITY OF MICHIGAN

WAYNE STATE UNIVERSITY

ELVING, PHILIP J; POLAROGRAPHIC BEHAVIOR OF ORGANIC COM-POUNDS (PO10414 001); 24 MONTHS \$52,100

OVERBERGER, CHARLES G; CYCLIC AZO COMPOUNDS - SYNTHESIS, STEREOCHEMISTRY, AND DECOMPOSITION STUDIES OF NOVEL RING SYSTEMS (FOIESES 001); 12 MONTHS \$17,800

DUNN, THOMAS M; ELECTRONIC SPECTRA OF INORGANIC COM-POUNDS (POISOSS 001); 6 MONTHS \$16,800

ASHE, ARTHUR J III; SYNTHESIS OF THE BORADENOZENE ANION AND OTHER HETEROCYCLIC SYSTEMS (POJOSES XOO); 12 MONTHS \$15,800 BARTELL, LAWRENCE S; ELECTRON DIFFRACTION STUDY OF MOLECULAR STRUCTURE AND BONDING (POSSUSE X00); 12 MONTHS

BRINTZINGER, HANS H; HYDRIDE AND NITROGEN COMPLEXES OF GROUP IV-VI TRANSITION METALS (POSSISO X00); 12 MONTHS \$54,100 WESTRUM, EDGAR F JR; INORGANIC CHEMICAL THERMODYNAMICS

(Possiff Xoc); 12 MONTHS \$37,500 OVERBERGER, CHARLES G; SYNTHESIS AND PROPERTIES OF ASYM.

METRIC POLYMERS (Possess X00); 12 MONTHS \$29,700 STILES, MARTIN; CYCLOADDITION AND CYCLOREVERSION REAC-

# TIONS OF ENOLATES (POSMES X00); 12 MONTHS \$25,000

RABAN, MORTON; TORSIONAL STEREOISOMERISM IN SULFENA-MIDES (P017000 001); 24 MONTHS \$39,800

OLIVER, JOHN P: REACTIVITY AND BOND CHARACTER OF OR-GANOMETALLIC COMPOUNDS (POIMM 001); 12 MONTHS \$18,100



JOHNSON, CARL R: SYNTHETIC, MECHANISTIC, AND STEREOCHEMI-CAL ASPECTS OF SULFONIMIDOYL COMFOUNDS (POISSES 608); 24 MONTHS \$63,500

#### MINNESOTA

# UNIVERSITY OF MINESOTA

PARHAM, WILLIAM B; CHEMICAL BEHAVIOR OF STRAINED AROMATIC SYSTEMS IN THE 'META'-CYCLOPHANE SERIES (POIIsis 001); 12 MONTHS 281 300

BRITTON, DOYLE; STRUCTURAL STUDIES OF INTERMOLECULAR INTERACTIONS (Poisson 00:); 24 MONTHS \$85,900

CRAWFORD, BRYCE L JR; ATR STUDIES OF STRUCTURAL PARAMETERS IN CONDENSED PHASES (POSOTIS XOO); 12 MONTHS \$36,000

REEVOY, MAURICE M; SOLVENT AND STRUCTURE IN PROTON TRANSFER TO CARBON AND HYDROGEN (POSISED X00); 12 MONTHS \$26,000

DAVIS, HOWARD TED; NON-EQUILIBRIUM PROCESSIS IN FLUIDS (POSSIS TO SELVED)

BARNETT, RONALD B; DIFFUSION-LIMITED RATE-DETERMINING STEPS IN CARBONYL AND ACYL GROUP REACTIONS (POSILIPS); 24 MONTHS \$34,000

MOSSOTTI, VICTOR O; THE INFORMATION STRUCTURE OF ANALYTICAL FLAMES (POSISSINO); 12 MONTHS \$40,000

#### MISSISSIPPI

# UNIVERSITY OF MISSISSIPPI

KLINGEN, THEODORE J; THE LIQUID CRYSTAL NATURE OF SOME ORGANO-CARBORANES AND NITROGEN-BORANES (POSOSSA); 24 MONTHS 822,800

PANETTA, CHARLES A; APPLICATIONS OF NEIGHBORING GROUP REACTIONS TO PEPTIDE CHEMISTRY (POSSES); 24 MONTHS \$36,900

UNIVERSITY OF SOUTHERN MISSISSIPPI

KRUBSACK, ARNOLD J; OXIDATIONS BY THIONYL CHLORIDE (POSITE) X00): 12 MONTHS \$17,000

#### MISSOURI

# UNIVERSITY OF MISSOURI, COLUMBIA

O'LAUGHLIN, JEROME W; SYNERGIC EXTRACTION AND GAS CHROMATOGRAPHY OF VOLATILE METAL CHELATES (POSSES): 24 MONTHS \$29,000

# UNIVERSITY OF MISSOURI, ST LOUIS

MURRAY, ROBERT W; THE MECHANISM OF OBONOLYSIS (PO29278 X6)); 12 MONTHS \$62,800

# WASHINGTON UNIVERSITY

YARIS, ROBERT; USE OF TIME-DEPENDENT METHODS IN ATOMIC AND MOLECULAR QUANTUM MECHANICS (POOPSIP 001); 24 MONTHS \$34,100

WAHL, ARTHUR C; OXIDATION-REDUCTION REACTIONS (POSSESS X01); 12 MONTHS \$50,700

#### MONTANA

# MONTANA STATE UNIVERSITY

ANACKER, EDWARD W; INFLUENCE OF SURFACTANT STRUCTURE ON MICELLIZATION (POISTSE 001); 12 MONTHS \$13,500

CAUGHLAN, CHARLES N; STRUCTURES OF ORGANOPHOSPHORUS COMPOUNDS (POSSESSE XOO): 12 MONTHS \$29,900

#### UNIVERSITY OF MONTANA

SHAFIZADEH, FRED; PYROLYTIC REACTIONS OF CELLULOSIC MATERIALS (POISSSE 001): 6 MONTHS \$11,000

#### NEW HAMPSHIRE

## DARTMOUTH COLLEGE

GRIBBLE, GORDON W; NITROGEN INVERSION AND OTHER PHENOMENA IN AZABICYCLOALKANES (POISS74 001); 12 MONTHS \$14,000

SPENCER, THOMAS A; AMINE CATALYSIS VIA IMINIUM ION FORMA-TION (POSISSO X00); 12 MONTHS \$29,300

# UNIVERSITY OF NEW HAMPSHIRE, DURHAM

UBBEL, J JOHN; A STUDY OF THE SNS REACTION (POOSTOL OOL); 12 MONTHS \$11,500

# **NEW JERSEY**

## NEWARK COLLEGE OF ENGINEERING

SUCHOW, LAWRENCE; COMPLEX RARE EARTH OXIDES, CHALCOGE-NIDES, AND PNICTIDES (P011587 001); 12 MONTHS \$14,500

# PRINCETON UNIVERSITY

8008, ZOLTAN G; MAGNETIC AND ELECTRIC PROPERTIES OF PI-MOLECULAR CRYSTALS (Postsid 601); 24 MONTHS \$31,000

8PIRO, T G; STRUCTURAL STUDIES IN INORGANIC CHEMISTRY (PO10188 001); 24 MONTHS \$48,000

SCHLEYER, PAUL VON R; CARBONIUM IONS AND FREE RADICALS-REACTIONS, REACTIVITY AND STRUCTURE (POSPOTE XOL); 12 MONTHS \$42,000

MISLOW, KURT, STRUCTURE AND MECHANISM IN ORGANOMETAL-LOID CHEMISTRY (POSOSS X00); 18 MONTHS \$90,100

JONES, MAITLAND JR; REACTIVE INTERMEDIATES (POSOTOT X00); 18 MONTHS \$39,800

MCCLURE, DONALD S; ELECTRONIC SPECTROSCOPY (POSOSE X00); 12 MONTHS \$75,900

#### RUTGERS UNIVERSITY

CHEMISTRY

DENNEY, DONALD B; ORGANOPHOSPHORUS CHEMISTRY (POISSES 001); 12 MONTHS \$15,000

GOODMAN, LIONEL; ELECTRONIC PROMOTION (POSIGLE X00); 18 MONTHS \$43,800

MOSS, ROBERT A; CARBENE, DIAZOTATE, AND MICELLAR ORGANIC CHEMISTRY (POSEISE XOO); 12 MONTHS \$24,400

LAITY, RICHARD W; ION MOBILITY IN MOLTEN SALTS (POSSEST); 12 MONTHS \$27,000

WASSERMAN, EDEL; PHOTOREACTIONS IN THE ATMOSPHERE (POLICES X00); 12 MONTHS \$27,800

#### NEW MEXICO

# NEW MEXICO STATE UNIVERSITY

LWOWSKI, WALTER; ELECTRON-DEFICIENT MOLECULES II (PORTEST X01); 12 MONTHS \$26,000

#### UNIVERSITY OF NEW MEXICO

NECKERS, DOUGLAS C; PHOTOCHEMICAL AND FREE RADICAL REACTIONS USING POLYMERS (POSSISES); 24 MONTHS \$31,600

#### NEW YORK

# CLARKSON COLLEGE OF TECHNOLOGY

MEITES, LOUIS; DIFFERENTIAL EBULLIONETRY AND DIFFERENTIAL EBULLIONETRIC TITRATICNS (POISSES 608); 24 MONTHS \$22,300

MATUEVIC, EGON; INTERACTIONS OF COMPLEX SOLUTE SPECIES WITH CHARGED INTERFACES (POISSED 001); 24 MONTHS \$37,500

KERKER, MILTON; PHYSICAL CHEMICAL STUDIES OF AEROSOLS (POSSES AXOO); 12 MONTHS \$75,000

#### COLLEGE AT FREDONIA

KELLER, ROY A. AND KARASEK, FRANCIS W; ULTRATRACE ANALY-SIS BY PLASMA CHROMATOGRAPHY (POSISSA); 24 MONTHS \$70,000

# COLLEGE OF ENVIRONMENTAL SCIENCE AND FORESTRY

SZWARC, MICHAEL; IONS, ION-PAIRS, RADICAL-JONS AND ELEC-TRON TRANSFER PROCESSES (PO21719 X01); 12 MONTHS \$72,000

#### **COLUMBIA UNIVERSITY**

STERN, RICHARD C; MOLECULAR BEAM STUDY OF INELASTIC BLECTRON-MOLECULE COLLISIONS (POILS) 000); 24 MONTHS \$44,900

STORK, GILBERT; SYNTHETIC METHODS AND TOTAL SYNTHESIS IN ORGANIC CHEMISTRY (POISTRS X01); 12 MONTHS \$63,000

PECHUKAS, PHILIP; SEMICLASSICAL APPROXIMATION IN MOLECU-LAR QUANTUM MECHANICS (PO19097 001); 24 MONTHS \$28,500

BERNE, BRUCE J; DYNAMICS OF MOLECULAR MOTION IN CON-DENSED MEDIA (POSSSSI 001); 12 MONTHS \$27,300 TURRO, NICHOLAS J; CHEMISTRY OF STRAINED RING COMPOUNDS

(Posses Xoo); 12 Month's \$41,000 KATZ, THOMAS J; THE CATALYSIS OF CYCLOADDITION REACTIONS

(POSOSES XOO); 12 MONTHS \$32,900
ZARE, RICHARD N; MOLECULAR FLUORESCENCE WITH EMPHASIS

ON LASER EXCITATION (POSISSE XON); 12 MONTHS \$77,800

DAILEY, BENJAMIN P; MICROWAVE STUDIES OF MOLECULAR MAGNETISM (POSSES); 24 MONTHS \$40,000

# CORNELL UNIVERSITY

SCHOLER, FREDERICK R; HETERONUCLEAR POLYHEDRAL BORANES (PO17053 001); 12 MONTHS \$10,100

SIENKO, M J; LONG-RANGE INTERACTIONS AND PHASE RELATIONS IN CONCENTRATED METAL-AMMONIA SYSTEMS (PO17708 001); 24 MONTHS \$42,000

HOFFMANN, ROALD: TRANSITION STATES AND INTERMEDIATES IN ORGANIC AND INORGANIC REACTIONS (POSSIST X01); 12 MONTHS \$62,000 FAY, ROBERT C; STEREOCHEMISTRY AND CONFIGURATIONAL REARRANGEMENTS OF METAL CHELATES (POSOS) X00); 12 MONTHS 277800

MORRISON, GEORGE H; QUANTITATIVE MASS SPECTROSCOPY OF SOLIDS (POSOSIO X00); 12 MONTHS \$48,300

MILLER, WILLIAM T; CHEMISTRY OF CARBON-FLUORINE COM-POUNDS - HIGHLY FLUORINATED ORGANOMETALLIC COMPOUNDS AS REACTION INTERMEDIATES (POSITIE XOO); 12 MONTHS \$47,000

BAUER, SIMON H; INTRAMOLECULAR GEOMETRY BY GAS PHASE ELECTRON DIFFRACTION (POSIOSO): 24 MONTHS \$38,400

#### NEW YORK UNIVERSITY

MOSKOWITZ, JULES W; HYDROGEN BONDING AND THE STRUCTURE OF AQUEOUS SOLUTIONS (POIOSSI 001); 24 MONTHS \$26,400



BCHUSTER, DAVID 1; MECHANISTIC INVESTIGATIONS IN KETONE PHOTOCHEMISTRY (POIOses 001); 24 MONTHS \$30,200

SUNDHEIM, BENSON R; PHOTOCHEMICAL PROCESSES IN FUSED SALTS (F014615 001); 24 MONTHS \$46,900

DELAHAY, PAUL; PHOTOELECTRON AND THERMIONIC EMISSION BY SOLUTIONS AND MOLTEN SALTS (POSORE XOO); 12 MONTHS \$56,000

#### RENSSELABR POLYTECHNIC INSTITUTE

JANZ. GEORGE J; HIGHLY CONCENTRATED SALT SOLUTIONS (PG)1884 X00); 18 MONTHS \$29,500

#### ROCKEFELLER UNIVERSITY

FIELD, FRANK H; TEMPERATURE EFFECTS IN HIGH PRESSURE MASS SPECTROMETRY (POSSISS X01); 12 MONTHS \$41,900

#### STATE UNIVERSITY AT ALBANY

FRISCH, R L; STATISTICAL MECHANICS AND TRANSPORT OF CLASSICAL FLUIDS (POIPER 1001); 24 MONTHS \$65,000

KUIVILA, HENRY G; STUDIES IN ORGANOTIN CHEMISTRY (POSSISS X01): 12 MONTHS 822,500

# STATE UNIVERSITY AT BINGHAMTON

INNES, K KEITH; MOLECULAR ELECTRONIC SPECTRA AND STRUC-TURE (P087961 X01): 18 MONTHS \$42,100

EISCH, JOHN J. CHEMICAL CONSEQUENCES OF UNSATURATION IN CYCLIC ORGANOBORANES (PGJ1004 X00), 12 MONTHS \$30,600

# STATE UNIVERSITY AT BUFFALO

COPPENS, PHILIP: DIFFRACTION METHODS FOR OBTAINING MOLECULAR CHARGE DISTRIBUTIONS, (PORRIOR 001): \$35,200

RITCHIE, CALVIN D; SOLVENT EFFECTS ON REACTIVITY (PORSIGA X01), 12 MONTHS \$22,100

MARINSKY, JACOB A: ION AND SOLVENT SELECTIVITY IN MIXED AND NON-AQUEOUS MEDIA (POJIJI): 24 MONTHS \$32,000

WILKINS, RALPH G; THE STUDY OF RAPID INORGANIC REACTIONS IN SOLUTION (POSSESS XOO): 12 MONTHS \$31,600

WUDL, FRED; THE STUDY AND APPLICATIONS OF THE CHEMISTRY OF STABLE ORGANIC RADICAL CATIONS (PC41099); 24 MONTHS \$25,100

# STATE UNIVERSITY AT STONY BROOK

HAIM, ALBERT; REDOX REACTIONS OF COORDINATION COMPOUNDS (POSSESS 001); 12 MONTHS \$30,000

JOHNSON, PHILIP M; ENERGY EVOLUTION IN ELECTRONICALLY EXCITED MOLECULES (POILIS 001); 24 MONTHS \$43,300

FRIEDMAN, HAROLD L; NMR METHODS FOR STUDYING ION DIS-TRIBUTIONS IN SOLUTIONS (PCSIEIS): 24 MONTHS \$47,000

LE NOBLE, WILLIAM J. REACTIONS IN COMPRESSED SOLUTIONS (PGS3111 X00); 12 MONTHS \$42,000

HANSON, DAVID M; STARK SPECTROSCOPY OF MOLECULAR SOLIDS (POSISIT X00), 12 MONTHS \$43,000

### SYRACUSE UNIVERSITY

PRINS, WILLEM; ELASTIC AND QUASI-ELASTIC LIGHT SCATTERING BY POLYMER GELS (POSI755); 24 MONTHS \$44,900

BRUMBERGER, HARRY: CRITICAL SCATTERING OF THE LIQUID SODIUM-LITHIUM SYSTEM (FOJISTS): 24 MONTHS \$21,200

# UNIVERSITY OF ROCHESTER

MUENTER, JOHN S; MOLECULAR BEAM STUDIES OF THE ELECTRONIC STRUCTURE OF SMALL MOLECULES (POI88GS 001); 24 MONTHS \$17,000

MOROKUMA, KEIJI; THEORETICAL INVESTIGATION OF CHEMICAL REACTIONS OF EXCITED STATES (POJ1998 X00); 12 MONTHS \$21,900

### YESHIVA UNIVERSITY

LIPSICAS, MAX; N.M.R. MEASUREMENTS IN GASES AND LIQUIDS (POSSESS X01): 12 MONTHS \$28,000

# NORTH CAROLINA

## DAVIDSON COLLEGE

BURNETT. JOHN NICHOLAS; APPLICATIONS OF STOPPED-FLOW KINETICS IN ELECTROCHEMISTRY (POJO668); 24 MONTHS \$22,900

#### DUKE UNIVERSITY

PALMER, RICHARD A; OPTICAL, MAGNETIC AND STRUCTURAL PRO-PERTIES OF METAL-CONTAINING INORGANIC HETEROCYCLES (POIJ470 001): 24 MONTHS \$30,900

### **EAST CAROLINA UNIVERSITY**

LAMB, ROBERT C; KINETICS-EFFICIENCY EXPERIMENTS ON SOME UNSYMMETRICALLY SUBSTITUTED BENZOYL PEROXIDES (POISELS 001); 24 MONTHS \$26,000

# NORTH CAROLINA AGRICULTURAL & TECH STATE UNIV

WEAVER, JOHN A; COSIP D RESEARCH INITIATION - ISOMERIZA-TION OF CYCLOPROPANES, ETHYLENE OXIDES AND HELATED COM-POUNDS UNDER THERMOLYTIC AND PHOTOLYTIC CONDITIONS (YUIDLIP); 15 MONTHS \$21,300

SULLIVAN, WALTER W; COSIP DRESEARCH INITIATION - SYNTHES-IS AND REACTIONS OF \$10 PHENANTHRYNE (YOLO150); 15 MONTHS \$21,600

# NORTH CAROLINA CENTRAL UNIVERSITY

TOTTON, ERZA L; COSIP D RESEARCH INITIATION - THE SYNTHESES OF PHYSIOLOGICALLY ACTIVE COMPONENTS (Y010441); 89 MONTHS 449,700

# NORTH CAROLINA STATE UNIVERSITY AT RALEIGH

TUCKER, WILLIAM P. CONTRIBUTIONS OF SULFUR TO RESONANCE STABILIZATION (POISETS 001), 24 MONTHS \$26,100

LONG, G GILBERT, AND BOWEN, LAWRENCE H; MOSSBAUER SPEC-TROSCOPY OF ANTIMONY COMPOUNDS (POISSE X00); 12 MONTHS \$34,000

UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

RICE, OSCAR K; CRITICAL PHENOMENA AND LIQUID HELIUM (HIGH-10) 12 MONTHS \$19,100

MEYER, THOMAS J; ELECTRON TRANSFER STUDIES ON OR-GANOMETALLIC COMPLEXES (POI7083 001): 24 MONTHS \$23,400

ISENHOUR, THOMAS L; COMPUTERIZED LEARNING MACHINES AP-PLIED TO CHEMICAL PROBLEMS (POI7474 001); 24 MONTHS \$48,100

HATFIELD, WILLIAM E; SPIN-SPIN COUPLING IN MAGNETICALLY CONDENSED COMPLEXES (POREST 001); 24 MONTHS \$12,000

REILLEY, CHARLES N; PROTON AND CARBON-18 NMR STUDIES OF CHELATES OF POLYAMINE COMPOUNDS (POSOMA X00); 12 MONTHS \$22,200

JOHNSON, CHARLES S JR; MAGNETIC RESONANCE STUDY OF MOLECULAR STRUCTURE AND CHEMICAL RATE PROCESSES (POSISES X00); 12 MONTHS \$46,600

HERMANS, J J; CORRELATION FUNCTIONS IN SOLUTIONS OF LARGE MOLECULES (POSJ454); 24 MONTHS \$43,600

RIEKE, REUBEN D. ELECTROCHEMICAL STUDIES ON PHOSPHOROUS CONTAINING COMPOUNDS (PGSSS11 X00): 12 MONTHS \$28,700

# UNIVERSITY OF NORTH CAROLINA AT GREENSBORO

HERMAN, HARVEY B; ELECTROCHEMICAL MEASUREMENT OF THE RATES OF CHEMICAL REACTIONS (POISST4 001): 12 MONTHS \$18,000

#### NORTH DAKOTA

# UNIVERSITY OF NORTH DAKOTA

KLABUNDE, KENNETH J; CARBONMONOSULFIDE CHEMISTRY (POSILISS), 24 MONTHS \$15,500

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# NONE; OTHER PROGRAM AWARDS (01AWDS); \$76

## CASE WESTERN RESERVE UNIVERSITY

FACKLER, J P JR; CHEMISTRY OF COORDINATION COMPOUNDS (P011701 001): 24 MONTHS \$61,700

OLAH, GEORGE A; STABLE, LONG-LIVED ORGANIC IONS (POISOSE XOS); 12 MONTHS \$40,500

KLOPMAN, GILLES; SELF CONSISTENT FIELD CALCULATIONS OF CHEMICAL REACTIVITY (P019985 001); 24 MONTHS 432,400

CARLSON, K DOUGLAS: INFRARED SPECTROSCOPY AND STRUC-TURES OF HIGH TEMPERATURE MOLECULES (POSSUS 001); \$27,700

SIMHA, ROBERT; THEORETICAL EQUILIBRIUM AND KINETIC STU-DIES OF COOPERATIVE PROCESSES IN MACROMOLECULES (POSO185); 24 MONTHS \$30,100

HRONES, JOHN A; A MAJOR INSTRUMENTS FACILITY (POSSSIS X00); 12
MONTHS \$75,000
APP. ALMANCAN FORMIN W. ALEGOROUS TO THE STATE OF T

ABRAHAMSON, EDWIN W; ELECTRONIC ENERGY TRANSFER IN THE GAS PHASE (PGJS869 X00): 12 MONTHS \$27,100

DUNBAR, ROBERT C; PROPERTIES AND REACTIONS OF CATIONS (POSSSS1 X00); 12 MONTHS \$19,000

KENNEY, MALCOLM E; PHTHALOCYANINES AND SIMILAR MACRO-CYCLES (Posisse Xoo): 12 MONTHS \$31,800

URBACH, FRED L; CIRCULAR DICHROISM AND RELATED STUDIES OF LOW-SYMMETRY METAL CHELATES (POSISIS): 24 MONTHS \$43,800

#### OHIO STATE UNIVERSITY

NEWMAN, MELVIN S; NEW SYNTHETIC REACTIONS BY THE \$\$,1-BICYCLIC MECHANISM (POISIIS XO: ; 12 MONTHS \$39,900

NIELSEN, HARALD H, AND RAO, K NARAHARI; ANNUAL SYMPOSIA ON MOLECULAR STRUCTURE AND SPECTROSCOPY (PO16818 001); \$3,300 SHECHTER, HAROLD; CARBENIC PROCESSES: THE CHEMISTRY OF DIAZO COMPOUNDS AND RELATED INTERMEDIATES (F022242 X01); 12 MONTHS \$41,300

LEUSSING, DANIEL L; CATALYSIS BY LABILE METAL IONS IN MIXED LIGAND SYSTEMS (POSSSIS X01); 12 MONTHS \$38,400

SHORE, SHELDON G; INTERMEDIATE BORON HYDRIDES AND THEIR DERIVATIVES (POSSESS X01): 12 MONTHS \$39,900

BUSCH, DARYLE H; METAL COMPLEXES OF LINEAR AND MACRO-CYCLIC TETRADENTATE LIGANDS (POSSESS XOI); 12 MONTHS \$41,500 GASSMAN, PAUL G; CHEMISTRY OF BENT BONDS (POSSES; XOO); 12 MONTHS \$50,000

KUWANA, THEODORE; OPTICALLY TRANSPARENT ELECTRODES (POJIEJO): 24 MONTHS \$62,800

HINE, JACK: EFFECT OF STRUCTURE ON RATES AND EQUILIBRIA (Posess X00): 12 MONTHS \$28,000



CHEMISTRY

OURLLETTE, ROBERT J; CONFORMATIONAL STUDIES USING NUCLEAR MAGNETIC RESONANCE (POSSES); 24 MONTHS \$34,100

HORTON, DEREK; CONFORMATIONAL ANALYSIS OF CYCLIC AND ACYCLIC SUGARS AND THEIR DERIVATIVES (POSSSES): 24 MONTHS BSS 000

#### ORIO UNIVERSITY

CLEARFIELD. ABRAHAM; STRUCTURAL STUDIES ON SYNTHETIC IN-ORGANIC ION EXCHANGE COMPOUNDS (POSSOSO 001); \$5,800

FREDERICK, JOHN E: INTRAMOLECULAR MOTION AND DIFFUSION OF RANDOM COIL AND ROD-LIKE MACROMOLECULES IN SOLUTION (POG8828 001); 24 MONTHS \$27,100

#### UNIVERSITY OF CINCINNATI

DAY, RICHARD A; MASS SPECTROMETRY OF PEPTIDES (POSISSI): 24 MONTHS \$29,700

#### UNIVERSITY OF TOLEDO

THOMPSON, H BRADFORD, AND JACOB, E JEAN: THE GEOMETRY OF AMIDE-LIKE NITROGEN (POSSESS YON): 12 MONTHS \$23,600

#### **OKLAHOMA**

# OKLAHOMA STATE UNIVERSITY

DEVLIN, J PAUL; A VIBRATIONAL STUDY OF THE STRUCTURES OF DISORDERED IONIC CRYSTALS, GLASSES AND MELTS (POSESSI); 24 MONTHS \$30,900

GILBERT J TENTH INFORMAL CONFERENCE ON PHOTOCHEMISTRY (POSSSIT): 6 MONTHS \$3,600

#### UNIVERSITY OF OKLAHOMA

HAGEN, ARNULF P. HIGH PRESSURE SYNTHESIS OF INORGANIC AND ORGANOMETALLIC COMPOUNDS (POISETS 001); 24 MONTHS \$40,200 CHRISTIAN, SHERRIL D. MOLECULAR COMPLEXES OF WATER IN

ORGANIC MEDIA (POSSSIS X00); 12 MONTHS \$30,000 ATKINSON, GORDON; ULTRASONIC INVESTIGATION OF POLYELEC.

TROLYTE SOLUTIONS (POSST&1 X00); 12 MONTHS \$25,000

FUNG. B M; NUCLEAR MAGNETIC RESONANCE STUDY OF LIQUID CRYSTALLINE POLYPEPTIDE SOLUTIONS (POSLEDE); 24 MONTHS \$38,600

#### OREGON

## OREGON STATE UNIVERSITY

HAWKES, STEPHEN J; OPTIMIZATION IN CHROMATOGRAPHY (P015450 001); 24 MONTHS \$32,000

NIBLER, JOSEPH W: RAMAN MATRIX ISOLATION SPECTROSCOPY (PO\$1808 001); \$4,200

HEDBERG. KENNETH; STRUCTURES, DYNAMICS AND VIBRATIONAL POTENTIAL FUNCTIONS OF MOLECULES (PO277CS XOI); 12 MONTHS \$48,700

WHITE, JAMES D; BIOGENETICALLY PATTERNED SYNTHESIS OF SECONDARY METABOLITES (POJI434); 24 MONTHS \$58,500

DECIUS, J C; RATE OF CONVERSION OF MOLECULAR VIBRATIONAL AND TRANSLATIONAL ENERGY (POSSEES): 24 MONTHS \$25,200

#### UNIVERSITY OF OREGON - EUGENE

PHILPOTT, MICHAEL R; THEORY OF MOLECULAR EXCITONS AND PRIMARY PHOTOCHEMICAL PROCESSES (PO20399 001); 24 MONTHS \$41,100

KOENIG, THOMAS W; REACTIVE RADICAL PAIRS (PORSOTI XOI); 12 MONTHS \$27,900

BOEKELHEIDE, VIRGIL; MOLECULES WITH NOVEL PI-ELECTRON

SYSTEMS (PO\$8107 X01): 12 MONTHS \$45,600 SIMPSON, WILLIAM T: MOLECULAR ELECTRONIC SPECTRA- ASSIGN-

MENTS AND INTERPRETATION (POSOSSO); 24 MONTHS \$80,200

BALDWIN, JOHN E: SYNTHESES AND REACTIONS OF HYDROCAR-BONS (POST 115): 24 MONTHS \$52,500

BALDWIN, JOHN E: SYNTHESES AND REACTIONS OF HYDROCAR-BONS (PO\$1415 001); \$30,000

# PENNSYLVANIA

## CARNEGIE-MELLON UNIVERSITY

VAN DYKE, CHARLES H: MIXED HYDRIDES OF THE GROUP IV ELE-MENTS (POISSSS 001); 12 MONTHS \$18,000

KEISCH, BERNARD, ISOTOPE MASS SPECTROMETRY TO TRACE THE SOURCE OF ARTISTS' MATERIALS (POIJS95 001); 24 MONTHS \$46,000

MOCK, WILLIAM L; PREPARATIVE AND MECHANISTIC SULFUR CHEMISTRY AND HEPTACYCLODODECANE VALENCE TAUTOMERS (Poissol 001), 12 MONTHS \$39,100

STEWART, ROBERT F; VALENCE STRUCTURE FROM COHERENT X-RAY SCATTERING AND STRUCTURES OF MOLECULAR COMPLEXES

(Pott 715 001); 24 MONTHS \$88,500 BOTHNER-BY, AKSEL A, AND FATELEY, WILLIAM G; ROTATION

ABOUT SINGLE BONDS (Posses 45 001); 8 MONTHS \$9,800

BROMBERG, J PHILIP, ABSOLUTE DIFFERENTIAL CROSS SECTIONS OF ELASTICALLY SCATTERED ELECTRONS (POLISIT XOI), 12 MONTHS \$30,000

KAY, ROBERT L; EFFECT OF PRESSURE ON WATER STRUCTURE IN AQUEOUS SOLUTIONS (POSILIS): 24 MONTHS \$50,000

57

ALEXANDER, LEROY E: STRUCTURAL STUDIES OF MODEL COM-POUNDS OF LINEAR POLYMERS (POSSITES): 24 MONTHS \$39,100

#### COMBUSTION INSTITUTE

WILLIAMS, GLENN C; FOURTEENTH SYMPOSIUM (INTERNATIONAL) ON COMBUSTION (KOJ461J\*); 12 MONTHS \$5,000

#### DREXEL UNIVERSITY

GUILLORY, WILLIAM ARNOLD; THE MATRIX-ISOLATED INFRARED AND ULTRAVIOLET SPECTRA OF IONIC SPECIES (POSSESS); 24 MONTHS \$34,000

GUILLORY, WILLIAM A: STRUCTURE AND REACTIONS OF THE OX-IDES OF NITROGEN IN URBAN ATMOSPHERES (POSISIS X00); 12 MONTHS #48,000

#### ESB RESEARCH CENTER

PILLA, ARTHUR A: A WORKSHOP IN BIOELECTROCHEMISTRY (P030149); 18 MONTHS \$11,000

#### LEHIGH UNIVERSITY

YOUNG, THOMAS E; SULFUR BONDING IN POTENTIALLY AROMATIC DITHIA HETEROCYCLIC COMPOUNDS (PO08597 002); 12 MONTHS \$12,000

#### PENNSYLVANIA STATE UNIVERSITY

POLO, S R, AND MCCUBBIN, T K JR; HIGH RESOLUTION MOLECULAR SPECTROSCOPY (Polities oor); 24 MONTHS \$60,000

FRITZ, J J, BERNHEIM, R A, AND STEELE, W A; LOW TEMPERATURE RESEARCH IN PHYSICAL CHEMISTRY IN THE CRYOGENICS LABORA. TORY (Poleose cos); 24 MONTHS \$165,000
DENO, NORMAN C; SELECTIVE CHLORINATION AND OXIDATION OF

REMOTE UNACTIVATED C-H BONDS (POLITS XOI); 12 MONTHS \$23,100
RIEHL, J W; LINE-BROADENING STUDIES OF THE SYMMETRIC

STRETCH IN SPHERICAL TOP MOLECULES (POSILIE): 24 MONTHS \$30 600 JACKMAN, LLOYD M; REACTIONS OF AMBIDENT ANIONS (POSSOS); 24 MONTHS \$39,200

# UNIVERSITY OF PENNSYLVANIA

HAMEKA, HENDRIK F; USE OF GREEN FUNCTION TECHNIQUES IN ATOMIC AND MOLECULAR CALCULATIONS (PO10710 001); 24 MONTHS \$40,200

ROBERTS, BRYAN W; SYNTHESIS AND STUDY OF SUBSTITUTED CYCLOBUTADIENES (POISSES 001); 24 MONTHS \$43,300

CAVA, MICHAEL P; CONDENSED CYCLOBUTANE AROMATIC COM-

POUNDS AND RELATED STUDIES (POS 1037 XOI); 12 MONTHS \$36,700 HOCHSTRASSER, ROBIN M, AND RENTZEPIS, PM; ULTRAFAST SPEC-TROSCOPY (PO25354 X01); 12 MONTHS \$37,000

DONOHUE, JERRY: STRUCTURAL STUDIES OF COMPOUNDS OF BIOLOGICAL INTEREST (POSJ782 X00); 12 MONTHS \$29,600

THORNTON, EDWARD R; ORIGIN AND INTERPRETATION OF ISOTOPE EFFECTS-SOLVOLYSIS MECHANISMS AND BIOCHENICAL STUDIES (POJ4491 X00); 12 MONTHS \$73,400

## UNIVERSITY OF PITTSBURGH

COETZEE, JOHANNES F; THERMODYNAMICS AND KINETICS OF REACTIONS IN DIPOLAR APROTIC SOLVENTS (POISILE OCI): 12 MONTHS

DOWD, PAUL; CHEMISTRY OF TRIMETHYLENEMETHANE (PORSES) 001); 24 MONTHS \$49,100

MILLER, FOIL A; VIBRATIONAL SPECTROSCOPY (POR4787 001); \$5,400 ARNETT, EDWARD M; PROTON TRANSFER, HYDROGEN BONDING

AND ION PAIRING (POSISES X00); 12 MONTHS \$54,800 KAUFMAN, FREDERICK; GAS PHASE RECOMBINATION RATES (Pose495 X00); 12 MONTHS \$17,000

MILLER, FOIL A: VIBRATIONAL SPECTRA OF ORGANOMETALLIC SUBSTANCES (POSSISS); 24 MONTHS \$39,500

# RHODE ISLAND

# **BROWN UNIVERSITY**

COLE, ROBERT H; DIELECTRIC PROPERTIES AND MOLECULAR IN-TERACTIONS IN GASES (POJ1185); 24 MONTHS \$53,900

WARD, HAROLD R, AND LAWLER, RONALD G; CHEMICALLY IN-DUCED DYNAMIC NUCLEAR POLARIZATION -ITS RELATION TO THE REACTIONS AND STRUCTURES OF ORGANIC FREE RADICALS (POSSESSE X00); 12 MONTHS \$38,500

# **SOUTH CAROLINA**

# UNIVERSITY OF SOUTH CAROLINA

DURIG, JAMES R; FAR INFRARED AND RAMAN SPECTRA OF SOME MOLECULAR CRYSTALS (POSOTES OOI); 24 MONTHS \$46,300

PETERSON, PAUL E; SUBSTITUTED HALONIUM IONS (POSO683); 24 MONTHS \$50,000

MERCER, E E; HALOGEN BRIDGE COMPLEXES OF TRANSITION METAL IONS (POSSESO); 24 MONTHS \$39,800

DURIG, JAMES R, AND ODOM, JEROME D; MICROWAVE, RAMAN AND FAR INFRARED SPECTRA AND STRUCTURE OF SEVERAL OR-GANOPHOSPHORUS AND BORON-PHOSPHORUS COMPOUNDS (POJA780); 24 MONTHS \$39,200



#### UNIVERSITY OF WISCONSIN, MADISON

Larsen, Edwin M; reduced states of the transitional ele-## ENTS (PO00300 001); 12 MONTHS \$22,100

SHAIN, IRVINO; RATES AND MECHANISMS OF ELECTRODE REAC-TIONS (POISSEI 008); 12 MONTHS \$39,600

WALTERS, JOHN P. SHORT-TIME REACTIONS IN SPARK DISCHARGES (P013975 001); 18 MONTHS \$75,000

SUNDARALINGAM, MUTTALYA; STRUCTURAL STUDIES (POIS977 001); 24 MONTHS \$38,500

WHITESIDES, THOMAS H; UNIMOLECULAR REARRANGEMENTS OF TRANSITION METAL COMPLEXES (POISSE 001); 24 MONTHS \$34,600

TREICHEL, PAUL M; ORGANOMETALLIC CHEMISTRY (POITED); 12 MONTHS \$11,000 DAHL.

LAWRENCE F STRUCTURAL SYSTEMATICS IN OR-GANOMETALLIC COMPLEXES (POIDITS XOE); 18 MONTHS \$63,600

DAHL, LAWRENCE F; STRUCTURAL SYSTEMATICS IN OR-GANOMETALLIC COMPLEXES (PC 12175 XO2); \$41,800 GOERING, HARLAN L; EQUILIBRIUM STUDIES OF CARBONIUM ION

PROCESSES (PORILIA YOI); 18 MONTHS \$30,200

DANCE, IAN G; TRANSITION METAL DITHIOLENE COMPLEXES (PO\$1145 X00); 12 MONTHS \$15,400

BERNSTEIN, RICHARD B; MOLECULAR BEAM SCATTERING (PORSOLA 008); 18 MONTHS \$111,400 WOODS, R CLAUDE; MICROWAVE SPECTROSCOPY OF TRANSIENT

SPECIES WITH LIFETIMES IN MILLISECOND RANGE (PORREIR 001); 12 MONTHS \$20,500

TROST, BARRY M; NEW APPROACHES TO THE SYNTHESIS OF OR-GANIC COMPOUNDS (Passass X00); 12 MONTHE \$43,800

WEST, ROBERT: CONJUGATED DERIVATIVES OF PERHALOGENATED CYCLIC COMPOUNDS (POSSOSI); 24 MONTHS \$81,500

CASEY, CHARLES P: PREPARATION AND REACTIONS OF METAL-CARBENE COMPLEXES (Page 160); 24 MONTHS \$27,800

21MMERMAN, HOWARD E: MECHANISTIC AND EXPLORATORY OR-

GANIC PHOTOCHEMISTRY (POSSESS X00); 12 MONTHS \$30,000 NELSEN, STEPHEN F; OXIDATION OF HYDRAZINES (POSSESS X00); 12 MONTHS \$16,000

#### WYOMING

# UNIVERSITY OF WYOMING

HOLT, SMITH L; ELECTRONIC STRUCTURE OF TRANSITION METAL IONS (P018432 001); 24 MONTHS \$38,500

COATES, GEOFFREY E; SYNTHETIC STUDIES IN BERYLLIUM CHEMISTRY (POSSSOS XOI); 12 MONTHS \$27,800

# SOCIAL SCIENCES

# **ANTHROPOLOGY**

# **ALASKA**

# UNIVERSITY OF ALASKA

HIPPLER, ARTHUR E; URBAN ACCULTURATION IN ALASKA (SOCIONAL 001): 6 MONTHS \$24,000

## ARIZONA

# ARIZONA STATE UNIVERSITY

SCHOENWETTER, JAMES: DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (Soleles: 24 Months \$2,600

### MUSEUM OF NORTHERN ARIZONA

LIPE, WILLIAM D; PREHISTORIC CULTURAL ADAPTATION IN THE CEDAR MESA AREA, SOUTHEAST UTAH (SOJJIIJ X00); 12 MONTHS \$47,900

# UNIVERSITY OF ARIZONA

JELINER, ARTHUR J; THE PREHISTORIC CAVE SITE OF TABUN (S002696 001): 24 MONTHS \$36,900

BLBIBTREU, H K; ANTHROPOMETRICS OF GROWTH IN A MULTI-ETHNIC COMMUNITY (SOJISJS); 12 MONTHS \$27,300

WILLIAM LONGACRE. AND THOMPSON. RAYMOND A. ARCHABOLOGICAL INVESTIGATIONS AT THE GRASSHOPPER RUIN, ARIZONA (S013418); 12 MONTHS \$54,400

## CALIFORNIA

# CALIFORNIA STATE UNIVERSITY, NORTHRIDGE

BLACK, MARY B; INTEGRATION OF COGNITIVE DOMAINS (SOJO178); 12 MONTHS \$26,300

# STANFORD UNIVERSITY

BEFU, HARUMI: INSTITUTIONAL AND MOTIVATIONAL FACTORS IN INTERPERSONAL RELATIONS (S004)70 001); 13 MONTHS \$24,000

WOLF, ARTHUR P; LAND DISTRIBUTION PROCESSES IN RURAL SOCIETIES (S050626 X00); 12 MONTHS \$24,500

COLLIER, GEORGE A: DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOLITER); 15 MONTHS \$4,500

GREENBERG, JOSEPH H; GENETIC CLASSIFICATION OF SOUTH AND CENTRAL AMERICAN LANGUAGES (SOJIDED); 18 MONTHS \$31,000

SKINNER, G WILLIAM, AND WINCKLER, EDWIN A; THE DYNAMICS OF ORGANIZATIONAL PROCESS IN CHINA (SG####55); 12 MONTHS \$64,900 FRAKE, CHARLES O; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOS1765); 24 MONTHS \$3,900

# UNIVERSITY OF CALIFORNIA, BERKELEY

ALVAREZ, LUIS W; JOINT U.S.-U.A.R. PYRAMID PROJECT (FORDETS 001); 12 MONTHS \$32,700

ISAAC, GLYNN L; EAST AFRICAN PREHISTORY AND PALEOEN-VIRONMENT (SO04)11 004); \$6,700

HOWELL, F CLARK; EARLY PHASES OF HOMINID EVOLUTION (S0\$7768 001): 12 MONTHS \$87,900

ISAAC, GLYNN L; EARLY HOMINID FOSSILS IN THE EAST RUDOLF AR & A (S018607 601); 24 MONTHS \$98,900

GEOGHEGAN, WILLIAM H; MARINE SUBSISTENCE PATTERNS AND SOCIO-ECOLOGICAL CONTEXTS (SOJOSES); 24 MONTHS \$40,800

GUMPERZ, JOHN J; COMMUNICATIVE COMPETENCE OF BILINGUALS (S050546); 24 MONTHS \$77,900

CLARK, J DESMOND, DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOJ1711), 8 MONTHS \$4,660

WASHBURN, SHERWOOD L; PRIMATE STUDIES AND HUMAN EVOLU-TION (SOJIELS X00); 12 MONTHS \$42,600

#### UNIVERSITY OF CALIFORNIA, IRVINE

ROMNEY, A KIMBALL; DOCTORAL DISSERTATION RESEARCH IN LIN-GUISTICS (SOJIESS), 18 MONTHS \$2,900

COLBY, BENJAMIN N; EIDOCHRONIC ANALYSIS OF IXIL MAYA TEXTS (S032252); 24 MONTHS \$48,200

#### UNIVERSITY OF CALIFORNIA, LOS ANGELES

PLOG, FRED T, AND HILL, JAMES N; ORGANIZATIONAL INNOVA-TIONS IN THE CHEVELON DRAINAGE, ARIZONA (SO:2006 001); 24 MONTHS \$48,800

HILL, JAMES N; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (50,000,00); 12 MONTHS \$4,960

BERGER, RAINER; DOCTORAL DISSERTATION RESEARCH IN PHYSI-CAL ANTHROPOLOGY (Science); 12 MONTHS \$3,100

MEIGHAN, CLEMENT W; REPORT ON NORTH CHILEAN ARCHAEOLO-GY (Sosisia); 12 MONTHS \$9,300

LEAF, MURRAY J; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOS \$075); 18 MONTHS \$4,800

## COLORADO

# UNIVERSITY OF COLORADO

HACKENBERG, ROBERT A; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOLIGIS); 12 MONTHS \$3,400

HACKENBERG, ROBERT A; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOJIEJE 001); \$750

### CONNECTICUT

### YALB UNIVERSITY

PILBEAM, DAVID; EARLY PHASES OF HOMINID AND PONGID EVOLU-TION (S003240 001), 24 MONTHS \$85,500

CHANG, KWANG-CHIH; THE PREHISTORY OF TAIWAN (SORBORD OOI); 24 MONTHS \$65,200

STANKIEWICZ, EDWARD; THE ACCENT PATTERNS OF THE SLAVIC LANGUAGES (SOJIRRI): 12 MONTHS \$8,300

CONKLIN, HAROLD C: DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOJIGJT); 18 MONTHS \$2,300

IRVING; DOCTORAL DISSERTATION RESEARCH IN ROUSE ANTHROPOLOGY (SOJITA); 8 MONTHS \$4,060

SIDNEY; DOCTORAL DISSERTATION RESEARCH LAMB. ANTHROPOLOGY (SOS 4040); 16 MONTHS \$3,300

# YALB UNIVERSITY-PEABODY MUSEUM OF NATURAL HISTORY

PILBEAM, DAVID, AND SIMONS, ELWYN L; BEHAVIORAL AND MORPHOLOGICAL STUDY OF THE CHIMPANEES 'PAN PANISCUS' (S018741); 36 MONTHS \$41,600

## DISTRICT OF COLUMBIA

# AMERICAN UNIVERSITY

MCNETT, CHARLES W JR; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOJOJ26); 12 MONTHS \$2,700

### CATHOLIC UNIVERSITY OF AMERICA

GARDNER, WILLIAM M; PALEO-INDIAN CULTURAL SYSTEMS IN THE SHENANDOAH VALLEY, VIRGINIA (S033\$54); 12 MONTHS \$24,900

### FLORIDA

# UNIVERSITY OF FLORIDA

MOORE, G ALEXANDER; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOJIEIS): 12 MONTHS \$1.250



#### AIORGIA

#### UNIVERSITY OF GEORGIA

CRAWFORD, JAMES M: SOUTHEASTERN INDIAN LANGUAGE PRO-JECT (SOINLE XOI): 12 MONTHS \$28,000

#### HAWAII

### BERNICE P BISHOP MUSEUM

GREEN, ROGER C, AND YEN, DOUGLAS E; THE PREHISTORY OF THE SOUTHRAST SOLOMON ISLANDS (SOCIETY DOI); \$6,500

SAHLINS, MARSHALL D: HAWAIIAN SOCIAL MORPHOLOGY AND ECONOMY IN THE LATE PREHISTORIC AND EARLY HISTORIC PERIODS (SOCRETO XOI); 12 MONTHS \$45,000

# UNIVERSITY OF HAWAII

STAROSTA, STANLEY; TAIWAN SYNTACTIC COMPARISON (SOGJIJI); 24 MONTHS \$13.500

GRACE, GEORGE W; NEW CALEDONIAN LINGUISTICS (S088548 001); 24 MONTHS \$20,000

HOWARD, ALAN; DEMOGRAPHIC APPROACHES TO SOCIAL BEHAVIOR (SOSOSSE); 24 MONTHS 143,700

BOGGS, STEPHEN T; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOSITII); 12 MONTHS 44,000

JOSEPHS, LEWIS S; A GRAMMAR OF PALAUAN (SOJJ6J6); 12 MONTHS

#### ILLINOIS

# FIELD MUSEUM OF NATURAL HISTORY

COLE, GLEN H, AND KLEINDIENST, MAXINE R: ANALYSIS OF ISIMILA SITE MATERIALS (SQJ1837); 24 MONTHS \$37,600

#### NORTHWESTERN UNIVERSITY

COHEN, RONALD; THE ORIGINS OF THE STATE (SOSJESS); 27 MONTHS \$40,900

BROWN, JAMES A: ARCHAEOLOGICAL DATA PROCESSING (S033865); 12 MONTHS \$20,000

# SOUTHERN ILLINOIS UNIVERSITY - CARBONDALE

TAYLOR, WALTER W; THE CAVE CULTURES OF COAHUILA, MEXICO (S0J0560), 12 MONTHS \$17,700

MULLER, JON D. DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (S030646): 9 MONTHS \$6,100

HANDLER, JEROME S; ACCULTURATIVE PROCESSES IN NEW WORLD AFRICAN CULTURES (SOJOSSJ); 12 MONTHS \$24,500

# UNIVERSITY OF CHICAGO

FREEMAN, LESLIE G; MOUSTERIAN ARTIFACT ASSEMBLAGES (S002107 001): 12 MONTHS \$1,500

FREEMAN, LESLIE G; MOUSTERIAN ARTIFACT ASSEMBLAGES (S009107 002), \$25,500

HAMP, ERIC P; A STUDY OF VANNETAIS BRETON (SOURSE 001); 12 MONTHS \$21,300

COHN, BERNARD S. DOCTORAL DISSERTATION RESEARCH IN

ANTHROPOLOGY (SOJO15J); 12 MONTHS \$3,500
BRAIDWOOD, ROBERT J; ANALYSIS OF EXCAVATED MATERIALS

FROM SOUTHEASTERN TURKEY (SOJOJES), 12 MONTHS \$9,800
BRAIDWOOD, ROBERT J; LATE PREHISTORY AND PALEOENVIRON-

MENTS OF SOUTHWESTERN ASIA (S030365 002); 12 MONTHS \$54,300 OXNARD, CHARLES E; FORM IN PRIMATE EVOLUTION (S030508); 24 MONTHS 195.004

TUTTLE, RUSSELL H; DOCTORAL DISSERTATION RESEARCH IN PHYSICAL ANTHROPOLOGY (SASITIS); 18 MONTHS \$2,200

DIFFLOTH, GERARD F; A GRAMMAR AND DICTIONARY OF SEMAI (Solitili); 17 MONTHS \$23,200

# UNIVERSITY OF ILLINOIS AT URBANA

WHITTEN, NORMAN E JR, AND WHITTEN, DOROTHEA S; LOWLAND QUECHUA ETHNICITY (S001919 001); 24 MONTHS \$14,600

GROVE, DAVID C; ARCHABOLOGICAL INVESTIGATIONS AT CHAL-CATZINGO (S011017): 18 MONTHS \$22,100

BRUNER, EDWARD M; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (S014844); 18 MONTHS 14.750

#### INDIANA

# INDIANA UNIVERSITY, BLOOMINGTON

VOEGELIN, C F. DOCTORAL DISSERTATION RESEARCH IN LINGUISTICS (SOSO158); 12 MONTHS \$1,350

#### 10W

## UNIVERSITY OF JOWA

HELM, JUNE, AND HOWREN, ROBERT; LINGUISTIC AND CULTURAL VARIATION AMONG ATHAPASKAN INDIANS (5003037 001); 24 MONTHS \$17,100

#### KANSAS

UNIVERSITY OF KANSAS

KINKADE, M DALE; LINGUISTICS OF THE PACIFIC NORTHWEST (S008561 001); 24 MONTHS \$54,200

#### KENTUCKY

UNIVERSITY OF LOUISVILLE

KRUMHOLZ, LOUIS A; RELATIONS OF PREHISTORIC MAN AND HIS MARINE RESOURCES (SOIJSIT); 24 MONTHS \$23,900

#### LOUISIANA

**TULANE UNIVERSITY** 

WAUCHOPE, ROBERT, PREPARATION OF 'THE HANDBOOK OF MID-DLE AMERICAN INDIANS' (SOMELLY NOI): 12 MONTHS \$33,000 PENG, FRED C C; A COMPARATIVE STUDY OF AINU DIALECTS

(S04/872); 24 MONTHS \$26,200

#### MAINE

UNIVERSITY OF MAINE, ORONO

SANGER, DAVID; PREHISTORIC ENVIRONMENT-SUBSISTENCE RELA-TIONSHIPS IN MAINE (S033414); 12 MONTHS \$22,900

#### MARYLAND

JOHNS HOPKINS UNIVERSITY

DYSON-HUDSON, NEVILLE, AND DYSON-HUDSON, RADA; COMPARA-TIVE AND METHODOLOGICAL STUDIES IN HUMAN ECOLOGY (S02072 X01): \$14.000

DYSON-HUDSON, NEVILLE, AND DYSON-HUDSON, RADA; COMPARA-TIVE AND METHODOLOGICAL STUDIES IN HUMAN ECOLOGY ISON8978 X08), 12 MONTHS \$49,200

### MASSACHUSETTS

HARVARD UNIVERSITY

HOWELLS, WILLIAM W; PUBLICATION OF 'CRANIAL VARIATION IN MAN (NOIO931\*); 12 MONTHS \$9,100

MOSELEY, MICHAEL E; PREHISTORIC URBAN-RURAL I.ELATION-SHIPS (SORPJEJ XOI); 12 MONTHS \$28,600

OLIVER, DOUGLAS L: DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOJOISE), 24 MONTHS \$5,900
OLIVER, DOUGLAS L; DOCTORAL DISSERTATION RESEARCH IN

ANTHROPOLOGY (SOJORLY); 18 MONTHS \$2,300
HOWELLS, W W; DOCTORAL DISSERTATION RESEARCH IN PHYSICAL

ANTHROPOLOGY (SOSOSIB); 3 MONTHS \$1,000

KERNAN, KEITH T; DOCTORAL DISSERTATION RESEARCH IN
ANTHROPOLOGY (SOSISIB); 12 MONTHS \$4,150

LAMBERG-KARLOVSKY, C.C. DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SQ1960): 24 MONTHS \$1,800

LAMBERG KARLOVSKY, C C. DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (Soligeo 001), \$7,800

MOSELEY, MICHAEL E: DOCTORAL DISSERTATION RESEARCH IN

ANTHROPOLOGY (SOLIED); 16 MONTHS \$7,700
WILLIAMS, STEPHEN: DOCTORAL DISSERTATION RESEARCH IN

ANTHROPOLOGY (Soisost), 6 MONTHS \$2,400

# ROBERT 8 PEABODY FOUNDATION OF ARCHAEOLOGY

MACNEISH, RICHARD S. THE ORIGINS OF AGRICULTURE AND CIVILIZATION IN HIGHLAND PERU (S002927 001); 11 MONTHS \$49,100

UNIVERSITY OF MASSACHUSETTS, AMHERST

WOODBURY, RICHARD, DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (S030636), 7 MONTHS \$2,850

FRASER, THOMAS M JR; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOJISJA); 6 MONTHS \$2,000

FRASER, THOMAS M JR; CULTURAL RESPONSE TO NATURAL DIS-ASTER AND RESETTLEMENT (SOJIDAL); 6 MONTHS \$760

# MICHIGAN

UNIVERSITY OF MICHIGAN

WHALLON, ROBERT JR; HUMAN POST-GLACIAL ADAPTATIONS IN THE MESOLITHIC PERIOD (SOLPRIO XOI); 12 MONTHS \$33,500

GRIFFIN, JAMES B; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOSIET); 11 MONTHS \$6,650

PARSONS, JEFFREY R; PREHISPANIC SETTLEMENT PATTERNS IN THE VALLEY OF MEXICO (SOSIDII): 24 MONTHS 446,600

FLANNERY, KENT V; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (S012060); 12 MONTHS \$5,300

WOLPOFF, MILFORD H; LOWER PLEISTOCENE HOMINID MORPHOLO. GY (SOSIOSS), 6 MONTHS \$11,600

## MINNESOTA

UNIVERSITY OF MINNESOTA

KISTE, ROBERT C; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SAMISE), 13 MONTHS \$3,400



#### MISSOURI

# UNIVERSITY OF MISSOURI, COLUMBIA

ROWLETT, RALPH; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOSISST): 18 MONTHS \$4,400

GAVAN, JAMES A. AND DWYER, SAMUEL J; FUNCTIONAL SHAPE ANALYSIS OF PRIMATE SKELETAL MATERIALS (SOSJATO); 12 MONTHS \$20,300

WOOD, W RAYMOND; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOSSESS): 12 MONTHS \$4,600

#### WASHINGTON UNIVERSITY

LEBLANC, STEVEN A, AND WATSON, PATTY JO: PREHISTORIC CUL-TURE AND ENVIRONMENT IN WEST CENTRAL NEW MEXICO (S032987);

#### **NESEASKA**

#### DANA COLLEGE

LEHMER, DONALD J; CULTURAL ECOLOGY OF THE HIDATSA INDI-ANS (S003003 001); 12 MONTHS \$26,200

### UNIVERSITY OF NEBRASKA AT LINCOLN

HENNING, DALE R; ANALYSIS OF AN ONEOTA SUBSISTENCE SYSTEM (S055407); 12 MONTHS \$12,400

#### **NEW JERSEY**

#### PRINCETON UNIVERSITY

SILVERMAN, MARTIN G; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (S0J0654); 12 MONTHS \$2,350

#### NEW MEXICO

# SCHOOL OF AMERICAN RESEARCH

SCHWARTZ, DOUGLAS W. CULTURAL AND ECOLOGICAL RAMIFICA-TIONS OF POPULATION GROWTH (SOIROU XOI); \$23,380

SCHWARTZ, DOUGLAS W; CULTURAL AND ECOLOGICAL RAMIFICA-TIONS OF POPULATION GROWTH (SO28001 X02); 12 MONTHS \$68,900

#### UNIVERSITY OF NEW MEXICO

BINFORD, LEWIS R; THE ECONOMICS OF ESKIMO HUNTING- PAST AND PRESENT (S028660 XOI); 12 MONTHS \$30,100

#### NEW YORK

## CITY COLLEGE

MCLENDON, SALLY; A DICTIONARY OF EASTERN POMO (SOJEISJ); 12 MONTHS \$15,600

### COLUMBIA UNIVERSITY

SOLECKI, RALPH S; PALEOZOOLOGICAL INVESTIGATIONS FROM THE MIDDLE PALEOLITHIC TO THE NEOLITHIC IN THE NEAR EAST (S002828 001); 24 MONTHS \$41,700

HARRIS, MARVIN; AUTHORITY AND SUPERORDINATION IN URBAN

FAMILIES (S002918 001); 20 MONTHS \$22,000

COHEN, MYRON L, AND PASTERNAX, BURTON; SOCIAL AND ECONOMIC ATTRIBUTES OF A RURAL SOCIETY (SO28179 XO1); 12 MONTHS \$27,000

COHEN, MYRON L, AND PASTERNAK, BURTON; SOCIAL AND ECONOMIC ATTRIBUTES OF A RURAL SOCIETY (SO22179 XO2); \$2,000

HOLLOWAY, RALPH L; EVOLUTION OF THE HUMAN BRAIN (SO29231 X01); 12 MONTHS \$11,300

PITKIN, HARVEY; DOCTORAL DISSERTATION RESEARCH IN LIN-GUISTICS (S030137); 24 MONTHS \$4,000

P. DOCTORAL DISSERTATION RESEARCH VAYDA. ANTHROPOLOGY (SOJO290); 18 MONTHS \$6,800

MURPHY, ROBERT F. DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SoJOSSI); 12 MONTHS \$2,650

PITKIN, HARVEY; DOCTORAL DISSERTATION RESEARCH IN LIN-

GUISTICS (SGJ149); 12 MONTHS \$5,200
PITKIN, HARVEY; A DICTIONARY OF YUKI, A LANGUAGE OF NORTHERN CALIFORNIA (SOJZISI); 12 MONTHS \$11,100

FRIED, MORTON H; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (Sojejes); 24 MONTHS \$5,100

JOHNSON, ALLEN W. COGNITION AND BEHAVIOR IN SUBSISTENCE ECOLOGY (S013014); 30 MONTHS \$57,100

PITKIN, HARVEY: DOCTORAL DISSERTATION RESEARCH IN LIN-GUISTICS (S034035); 12 MONTHS \$1,900

HARRIS, MARVIN; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOJUGS), 24 MONTHS \$6,800

MURPHY, ROBERT F: DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (Sos 1930): 12 MONTHS \$3,250

### CORNELL UNIVERSITY

GRIMES, JOSEPH E; CROSS LANGUAGE STUDY OF DISCOURSE STRUCTURES (S003180 001); 24 MONTHS \$44,600

KENNEDY, KENNETH A R; ECOLOGY AND EVOLUTION OF PREHISTORIC MAN (SOJOLIT); 24 MONTHS \$22,600

SMITH, ROBERT J; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (S030507); 13 MONTHS \$5,000

#### HUNTER COLLEGE

SZALAY, FREDERICK: FUNCTIONAL STUDIES OF THE POSTCRANIAL MORPHOLOGY OF PRIMATES (SOJIJIS); 24 MONTHS \$26,100

#### DURRNS COLLEGE

JOCHNOWITZ, GEORGE; SYNCHRONIC AND DIACHRONIC ANALYSES OF JUDEO-ITALIAN DIALECTS (S008058 001); \$1,530

PAUL INVESTIGATIONS TOLETOY, ARCHABOLOGICAL TLAPACOYA. MEXICO (S088809 001); 12 MONTHS \$13,900

# STATE UNIVERSITY AT BINGHAMTON

VAN DER MERWE, NIKOLAAS; ARCHABOLOGY OF THE IRON AGE IN THE PHALABORWA AREA (SOSPER XOO); 16 MONTHS \$48,900

VAN DER MERWE, NIKOLAS J; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOLUTE); 24 MONTHS \$6,600

# STATE UNIVERSITY AT BUFFALO

NAROLL, RAOUL; ACCULTURATION SEQUENCES (SOSOSEI); 12 MONTHS \$27,600

#### TEACHERS COLLEGE

COMITAS, LAMBROS; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOS 1895); 12 MONTHS \$3,900

#### UNIVERSITY OF ROCHESTER

DAY, CHRISTOPHER; JACALTEC DICTIONARY (SOJOLI): 19 MONTHS \$22,600

DAY, CHRISTOPHER; JACALTEC DICTIONARY (SOJOJI 1 001); \$1200

DAY, CHRISTOPHER: DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOJO653); 12 MONTHS \$2,100 DAY, CHRISTOPHER; DOCTORAL DISSERTATION RESEARCH IN

#### **NORTH CAROUNA**

#### DUKE UNIVERSITY

BUETTNER-JANUSCH, JOHN; PRIMATE HEMOGLOBINS (S030657 X00); 12 MONTHS \$46,300

# University of North Carolina at Chapel Hill

ANTHROPOLOGY (SOJOSSJ 001); 12 MONTHS \$3,600

HONIGMANN, JOHN J; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOSOSTS); 24 MONTHS \$7,500

#### OKLAHOMA

## UNIVERSITY OF OKLAHOMA

DUBOIS, ROBERT L; DEVELOPMENT OF AN ARCHEOMAGNETIC CHRONOLOGY FOR MESOAMERICA (SO22) 182 XO1); 12 MONTHS \$29,000

## OREGON

# UNIVERSITY OF OREGON - EUGENE

AIKENS, C MELVIN; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOJO274); 12 MONTHS \$4,900 STERN, THEODORE; DOCTORAL DISSE ANTHROPOLOGY (SOJOGIT); 12 MONTHS \$1,400 DISSERTATION RESEARCH IN

## PENNSYLVANIA STATE UNIVERSITY

DYKE, BENNETT; COMPUTER SIMULATION OF GENETIC-DEMO-GRAPHIC STRUCTURE (S02)322 001); 12 MONTHS \$44,900 SANDERS, WILLIAM T; ECOLOGICAL SURVEY OF THE BASIN OF

MEXICO (S033952); 12 MONTHS \$24,500

# UNIVERSITY OF PENNSYLVANIA

RAINEY, FROELICH; DATING OF POTTERY AND FAIENCE BY THER-MOLUMINESCENCE (S002718 001); 12 MONTHS \$34,000

LINARES DE SAPIR, OLGA; ARCHAEOLOGICAL INVESTIGATIONS IN WESTERN PANAMA (S002846 001); 12 MONTHS \$26,400

KIDDER, ALFRED 11: DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOJOSIO): 12 MONTHS \$2,600

GOODENOUGH, WARD H; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOJIEJS); 25 MONTHS \$1,200

WALLACE, ANTHONY F C; CULTURE CHANGE IN THE INDUSTRIAL REVOLUTION (SOJJOJ6): 24 MONTHS \$59,400

GOODENOUGH, WARD H: TRUK LEXICOGRAPHY AND GRAMMAR (SOJJIJ2); 24 MONTHS \$12,700

GOODENOUGH, WARD H; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOJUBBO); 12 MONTHS \$7,900

### UNIVERSITY OF PITTSBURGH

WHITE, DOUGLAS R; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOSOSST); 13 MONTHS \$3,000

RICHARDSON, JAMES B III; CULTURAL EVOLUTION AND ECOLOGY OF THE TALARA REGION (SOSTERS); 15 MONTHS \$27,600

NUTINI, HUGO G; ETHNOHISTORICAL STUDY OF SYNCRETISM AND ACCULTURATION (SOJELSI); 12 MONTHS \$10,100

### RHODE ISLAND

# **BROWN UNIVERSITY**

DEETZ, JAMES: DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (S034075); 12 MONTHS \$8,100



# TEXAS

RICE UNIVERSITY

GAMBT, FREDERICK C: DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOJISST): 12 MONTHS \$2,750

SOUTHERN METHODIST UNIVERSITY

WENDORF, FRED; PREHISTORY OF THE RIFT VALLEY (S027425 Q01): 2A MONTHS MARAGO

MARKS, ANTHONY E; PREHISTORIC SETTLEMENT AND INTRASITE PATTERNING IN THE CENTRAL NEGEV, ISRAEL (SOCIECT XOI); 12 MONTHS \$84,700

WENDORP, FRED; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOJOGJE); 6 MONTHS \$2,400

MARKS, ANTHONY DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOSTOTA); 8 MONTHS \$2,900

WETHERINGTON, RONALD K; HIGHLAND MAYAN CERAMICS (SOSSESS); 12 MONTHS \$22,600

SAMPSON, C GARTH; ARCHAEOLOGY OF THE BRITISH ACHEULIAN (S0\$\$594); 12 MONTHS \$36,700

UNIV OF TEXAS AT AUSTIN

WARDLAW, FRANK H; PUBLICATION OF URBANIZATION AT TEOTIHUACAN, MEXICO, VOLUME I (NOMISET): 54 MONTHS \$18,300
WARDLAW, FRANK H; PUBLICATION OF 'SAN LORENZO- OLMEC

MAN AND OLMEC LAND' (NOSI(47°); 60 MONTHS \$22,900 SELBY, HENRY A: DECISION-MAKING IN CULTURE (SOJOSOJ); 12 MONTHS \$28,400

MACLACHLAN, MORGAN D: DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOME 40); 24 MONTHS \$4,750

#### WASHINGTON

UNIVERSITY OF WASHINGTON

KLEIN, RICHARD G; EXCAVATION OF MIDDLE STONE AGE SITES IN SOUTH AFRICA (S00/01/ 001), 12 MONTHS \$6,800

WASHINGTON STATE UNIVERSITY

IRWIN, HENRY T, AND FRYXELL, ROALD; ARCHAEOLOGY OF A PALEOLITHIC SITE IN SPAIN (S00/005 001); 12 MONTHS \$5,500

DAUGHERTY, RICHARD D; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOJ1252); 5 MONTHS \$1,300

SASO, MICHAEL RALEIGH; SOCIETY IN CHANGE (SOSSORE); 24 MONTHS \$28,000

FERRELL, RALEIGH; ETHNOGRAPHIC FIELDWORK AMONG THE RUKAI OF TAIWAN (SOJJS14); 24 MONTHS \$12,000

UNIVERSITY OF WISCONSIN, MADISON

THOMPSON, DONALD E, LATE PREHISTORY OF THE EASTERN SLOPES OF THE ANDES (SOURCE OCE), 12 MONTHS \$4,700

DENEVAN, WILLIAM M; ABORIGINAL RIDGED FIELD AGRICULTURE (SOJOJIE): 13 MONTHS \$20,100

BAERREIS, DAVID A; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (Scioles); 13 MONTHS \$500 BAERREIS, DAVID A; DOCTORAL DISSERTATION RESEARCH IN

ANTHROPOLOGY (Society), 15 MONTHS \$1,650

ROBINSON, J T; DOCTORAL DISSERTATION RESEARCH IN PHYSICAL ANTHROPOLOGY (SOS 4039); 12 MONTHS \$2,500

BAERREIS, DAVID A; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (SOLIOTA), 12 MONTHS \$4,400

UNIVERSITY OF WISCONSIN, MILWAUKER

FOWLER, MELVIN L; CAHOKIA ARCHAEOLOGY (SOCIOOR 001); 15 MONTHS \$58,600

TAPPEN, NEIL C; THE ORGANIZATION OF BONE IN FOSSIL HOMINIDS (S030515); 24 MONTHS 444,400
TAPPEN, NEIL C; THE ORGANIZATION OF BONE IN FOSSIL

HOMINIDS (S030513 001); \$1,500

FOWLER, MELVIN L; DOCTORAL DISSERTATION RESEARCH IN ANTHROPOLOGY (Sosiesi), 12 MONTHS \$2,950

GREENFIELD, SIDNEY M; ORIGINS OF THE SOUTH ATLANTIC SYSTEM (S012141); 17 MONTHS \$26,000

# ECONOMIC SCIENCES

#### CALIFORNIA

RAND CORPORATION

SHAPLEY, LLOYD S; STUDIES IN MATHEMATICAL ECONOMICS USING GAME THEORY (SOSIESS); 16 MONTHS \$57,200

STANFORD UNIVERSITY

HICKMAN, BERT G; A MEDIUM-TERM MACROECONOMETRIC MODEL OF THE U. S. ECONOMY (S002581 GOI); 24 MONTHS \$111,100

ANDERSON, T W, AND ANEMIYA, TAKESHI; SELECTED TOPICS IN ECONOMETRIC THEORY (SOCIES OOI); 24 MONTHS \$128,800

KURZ, MORDECAI, AND LAU, LAWRENCE J; BEHAVIORAL EQUA-TIONS AND THE NEOCLASSICAL THEORY OF PRODUCTION AND CON-SUMPTION (S002874 001); 24 MONTHS \$136,900

KURZ, MORDECAI; SCONOMIC BEHAVIOR UNDER UNCERTAINTY (S005168 001); \$18,400

YOTOPOULOS, PAN A; DOCTORAL DISSERTATION RESEARCH IN ECONOMICS (SOJOCIO); 12 MONTHS \$3,700

MANNE, ALAN S, AND MAJUMDAR, MUKUL K; DEVELOPMENT PLANNING (SOSO17); 24 MONTHS \$81,000 MUKUL K: MULTISECTOR

BOSKIN, MICHAEL J. DOCTORAL DISSERTATION RESEARCH IN ECONOMICS (SOMMEN): 13 HONTHS \$1,400 ROSSE, JAMES N. DOCTORAL DISSERTATION RESEARCH IN

ECONOMICS (SOJJ755); 18 MONTHS \$1,600 UNIVERSITY OF CALIFORNIA, BERKELEY

MARSCHAK, T A, AND RADNER, ROY; ECONOMIC SYSTEMS AND OR-GANIZATION (S002072 004); 24 MONTHS \$160,000 BREAK, GEORGE F; DOCTORAL DISSERTATION RESEARCH IN

Economics (sozzjet), 12 months \$1,600

UNIVERSITY OF CALIFORNIA, LOS ANGELES MCCALL, JOHN J; STOCHASTIC ECONOMIC MODELS OF POVERTY, JOB SEARCH AND RACIAL DISCRIMINATION (S002027 001); 24 MONTHS

MARSCHAK, JACOB: INTERDISCIPLINARY COLLOQUIUM ON MATHE-MATICS IN THE BEHAVIORAL SCIENCES (SOCIES COL); 12 MONTHS \$2,800

UNIVERSITY OF CALIFORNIA, SAN DIEGO-REVELLE COLLEGE

ORR, DANIEL: OPTIMAL ASSET MANAGEMENT AND THE DEMAND FOR MONEY (S002532 001); 24 MONTHS \$49,400

#### COMMICTICAL

YALE UNIVERSITY

BRAINARD, WILLIAM C; ECONOMIC THEORY AND ECONOMETRICS (50000)0 X03); 12 MONTHS \$284,500

RANIS, GUSTAV; COMPARATIVE ANALYSIS OF ECONOMIC DEVELOP-MENT (S002804 001); 24 MONTHS \$170,100

TRUMAN, EDWIN M; COLLABORATIVE RESEARCH ON EUROPEAN ECONOMIC INTEGRATION (SO01957 001); 9 MONTHS \$10,600

SHUBIK, MARTIN, AND WOLF, GERRIT; EXFERIMENTAL ECONOMIC AND PSYCHOLOGICAL MODELING IN AN AUTOMATED LABORATORY (Sojeje6); 12 MONTHS \$48,100

COHEN, BENJAMIN I, COOPER, RICHARD N, AND ALEJANDRO, CAR-LOS F D; THE INFLUENCES OF INTERNATIONAL TRADE AND FINAN-CIAL POLICIES ON LDC DEVELOPMENT (SOISTIL XOO); 12 MONTHS \$49,500

#### DISTRICT OF COLUMBIA

AMERICAN UNIVERSITY

WILBER, CHARLES K; DOCTORAL DISSERTATION RESEARCH IN ECONOMICS (5030950); 12 MONTHS \$1,100

GEORGE WASHINGTON UNIVERSITY

DE ALESSI, LOUIS; RESOURCE ALLOCATION UNDER OWNERSHIP AND PUBLIC REGULATION (S030309); 24 MONTHS \$67,300 URBAN INSTITUTE

HOCHMAN, HAROLD M; STUDIES IN METROPOLITIAN POLITICAL ECONOMY (S030184); 24 MONTHS \$98,800

HOCHMAN, HAROLD M; COLLABORATIVE RESEARCH ON UTILITY IN-TERDEPENDENCE, INCOME REDISTRIBUTION AND FISCAL STRUC-TURE (South 14 X00); 12 MONTHS \$48,400

#### FLORIDA

UNIVERSITY OF MIAMI

MYERS, RAMON H; ECONOMIC EFFICIENCY AND CHINESE AGRICUL-TURE (S032075); 6 MONTHS \$2,300

## ILLINOIS

NORTHWESTERN UNIVERSITY

EISNER. ROBERT: INVESTMENT THEORY AND TECHNICAL PROGRESS (5001502 001); 12 MONTHS \$36,300

EISNER ROBERT; INVESTMENT THEORY TECHNICAL PROGRESS (S002502 002), \$600

ZALTMAN, GERALD, DOCTORAL DISSERTATION RESEARCH IN ECONOMICS (SOSTORS), 12 MONTHS \$1,800

REITER, STANLEY; COLLABORATIVE RESEARCH ON SYSTEMS AND TECHNIQUES OF ECONOMIC ORGANIZATION (SOJING X00); 12 MONTHS \$66,900

RUBENSTEIN, ALBERT H; DOCTORAL DISSERTATION RESEARCH IN ECONOMICS (SOSISES), 15 MONTHS \$5,100

SOUTHERN ILLINOIS UNIVERSITY - EDWARDSVILLE

KOHN, ROBERT E; A DYNAMIC LINEAR PROGRAMMING MODEL FOR AIR POLLUTION CONTROL (S009899 001); 24 MONTHS \$35,900

UNIVERSITY OF CHICAGO

ZELLNER, ARNOLD; BAYESIAN INFERENCE IN ECONOMETRICS (S002347 001); 24 MONTHS \$100,000

WEIL, ROMAN L, AND GOULD, JOHN P; PROGRAMMING, DECISION THEORY, AND THE ECONOMICS OF INFORMATION (S002703 001); 24 MONTHS \$80,200



FOGEL, ROBERT W: COLLABORATIVE RESEARCH ON FACTOR PRODUCTIVITY IN AMERICAN AGRICULTURE (SOCIERE OGI); \$3,000

COOPER, J PHILLIP, AND FISCHER, STANLEY: A STOCHASTIC SIMU-LATION STUDY OF MONETARY POLICY (SOLUTIO OCI); 18 MONTHS \$35,000 THEIL, HENRI; DECOMPOSITION ANALYSIS IN THE SOCIAL AND AD-MINISTRATIVE SCIENCES (SCHOOL); SO MONTHS \$78,000

CORDON, ROBERT J; LABOR WARKET MODELS AND THE RATE OF IN-PLATION (SOJOTOS); 24 MONTHS \$52,900

TELSER, LESTER G; EQUILIBRIUM PRICE DISTRIBUTIONS AND MARKET STRUCTURE (SOME) 10 XOO): 12 MONTHS \$45,700

NELSON, CHARLES R; TOPICS IN ECONOMETRICS (SOLISOI); 12 MONTHS \$12,500

#### INOLANA

# Indiana University, Bloomington

BATEMAN, FRED, AND FOUST, JAMES D; COLLABORATIVE RESEARCH ON UNITED STATES MANUFACTURING (SOORISE COI); 24 MONTHS \$51,500

# IOWA STATE UNIVERSITY OF SCIENCE & TECHNOLOGY

FOX, KARL A; ECONOMICS OF HIGHER EDUCATION (SOORIES OOI); 24 MONTHS \$89,800

## UNIVERSITY OF IOWA

WU. BRIH-YEN; CONFERENCE ON DECISION UNDER UNCERTAINTY (S013031); 12 MONTHS \$6,500

#### KANSAS

# UNIVERSITY OF KANSAS

WEISS, THOMAS J; COLLABORATIVE RESEARCH ON UNITED STATES MANUPACTURING (S001430 06:); 24 MONTHS \$25,800

# UNIVERSITY OF MARYLAND, COLLEGE PARK

MCGUIRE, MARTIN C; SCONOMIC THEORY OF GOVERNMENT FORMA-TION, ORGANIZATION AND BEHAVIOR (SOSSESS); 6 MONTHS \$11,400

#### MASSACHUSETTS

#### **BOSTON UNIVERSITY**

KARP, MARK; DOCTORAL DISSERTATION RESEARCH IN ECONOMICS (SOJOJ51); 12 MONTHS \$2,100

# CENTER FOR THE STUDY OF PUBLIC POLICY

EDEL, MATTHEW D. AND SCLAR, ELLIOT D. INTRAMETROPOLITAN MIGRATION, PUBLIC FINANCE AND PROPERTY VALUES (SOISSITE); 8 MONTHS \$21,400

#### HARVARD UNIVERSITY

GRILICHES, ZVI; ECONOMETRIC INVESTIGATIONS OF TECHNOLOGI-CAL CHANGE (Socret XOI); 12 MONTHS \$56,900

JORGENSON, DALE W; ECONOMETRICS OF INVESTMENT AND VALUATION (SOCREGOR DOR); 12 MONTHS \$42,800

PIERSON, GAIL; ANALYSIS OF THE DETERMINANTS OF THE LONG-TERM RATE OF INTEREST (SOCIET COI): 6 MONTHS \$9,500

ARROW, KENNETH J. ZECKHAUSER, RICHARD, AND DORFMAN, ROBERT; ORGANIZATIONS, DECISIONS, AND WELFARE (SOSSESS XOI); 12 MONTHS \$32,700

GREEN, JERRY, TOWARD A BEHAVIORAL THEORY OF ECONOMIC EQUILIBRIUM (SOSIESS); 24 MONTHS \$30,100

LEAMER, EDWARD E; BAYESIAN ANALYSIS OF ECONOMIC DATA (S691929); 24 MONTHS \$26,800

STARRETT, DAVID A; INTERTEMPORAL ALLOCATION, INDIVISIBILI-TIES AND EXTERNALITIES (SOJJ958); 24 MONTHS \$26,000

LEONTIEF, WASSILY W. BASIC RESEARCH IN INPUT-OUTPUT ANAL-YSIS (S014344 X00); 12 MONTHS \$59,000

# MASSACHUSETTS INSTITUTE OF TECHNOLOGY

BHAGWATI, JAGDISH N; THEORY OF TRADE AND WELFARE (S009978 001); 24 MONTHS \$63,000

SAMUELSON, PAUL A; ECONOMIC THEORY AND STOCHASTIC PROCESSES (S012054 X00); 12 MONTHS \$50,800

SOLOW, ROBERT M; THEORETICAL URBAN ECONOMICS (SOLIZIO), 15 MONTHS \$74,400

DIAMOND, PETER A, AND FOLEY, DUNCAN K; PUBLIC POLICY AND UNCERTAINTY (SOJJEI4 X00); 12 MONTHS \$35,800

HOLZMAN, FRANKLYN D; THE THEORY AND PRACTICE OF IN-TEGRATION OF CENTRALLY PLANNED ECONOMICS (SQ1101); 12 MONTHS \$14,100

# university of massachusetts, amberst

MIRMAN, LEONARD M; ECONOMIC SYSTEMS UNDER THE IN-FLUENCE OF UNCERTAINTY (SOIOSIE); 12 MONTHS \$7,200

SMITH, VERNON L: EXPLORATIONS IN APPLIED ECONOMIC THEORY (Soserss X00), 12 MONTHS \$31,600

#### MICHIGAN

#### MICHIGAN STATE UNIVERSITY

RAMSEY, JAMES B; AN ANALYSIS OF SPECIFICATION ERRORS IN ECONOMETRIC RESEARCH (S003291 001); \$11,600

# UNIVERSITY OF MICHIGAN

SCHERER, FREDERIC M; THE ECONOMICS OF MULTI-PLANT OPERA-TION (S00286) 001); \$2,906

HYMANS, SAUL, QUANTITATIVE ECONOMICS (SOOSESS OOI); \$16,000 STAFFORD, FRANK 1: THE ECONOMIC STATUS OF THE ACADEMIC PROFESSIONS (SOUISES); 12 MONTHS \$72,000

#### WAYNE STATE UNIVERSITY

FAND, DAVID 1; PROBLEMS IN MONETARY ECONOMICS (SOSILISE); 12 MONTHS \$38,000

#### M. INESOTA

#### UNIVERSITY OF MINNESOTA

KRUEGER, A O; DOCTORAL DISSERTATION RESEARCH IN ECONOMICS (SOSOSES); 12 HONTHS \$1,400

HURWICZ, LEONID: COLLABORATIVE RESEARCH ON SYSTEMS AND TECHNIQUES OF ECONOMIC ORGANIZATION (SOSIETS X00); 12 MONTHS \$60,000

#### MISSOURI

## WASHINGTON UNIVERSITY

JONES, ALICE H; ESTIMATES AND ANALYSIS OF WEALTH (S004457 001); 12 MONTHS \$33,800

#### **NEW JERSEY**

## PRINCETON UNIVERSITY

CHOW, GREGORY C, AND GOLDFELD, STEPHEN M; ANALYSIS AND CONTROL OF DYNAMIC ECONOMIC PROCESSES (SOISOOF X00): 12 MONTHS \$97,300

BRANSON, WILLIAM H; COLLABORATIVE ECONOMETRIC STUDIES OF WORLD TRADE AND PAYMENTS (SOI 1500 X00); 12 MONTHS \$14,500

#### **NEW YORK**

#### CITY COLLEGE

MADANSKY, ALBERT; ESTIMATION PROBLEMS IN ECONOMETRICS (S033886): 24 MONTHS \$42,100

# COLUMBIA UNIVERSITY

PHELPS, EDMUND S; THE ECONOMICS OF INCOME REDISTRIBUTION (S033374); 12 MONTHS \$18,800

# CONFERENCE BOARD

CREAMER, DANIEL; CAPITAL AND OUTPUT IN MANUFACTURING-TRENDS AND RELATIONSHIPS 1949 (SOLISII); 24 MONTHS \$64,000

# HOFSTRA UNIVERSITY

LEONARD, WILLIAM N; RESEARCH AND DEVELOPMENT AS A DETERMINANT OF INDUSTRIAL GROWTH (SOMOTA); 24 MONTHS \$34,900

# NATIONAL BUREAU OF ECONOMIC RESEARCH

KRAVIS, IRVING B, AND LIPSEY, ROBERT E; ROLE OF PRICES IN IN-TERNATIONAL TRADE (Societs oot), 24 MONTHS \$75,000

BECKER, GARY S; RESEARCH IN LAW AND ECONOMICS (SOCIETY COI): \$80,000

WELCH, FINIS: FACTORS IN INCREASING AGRICULTURAL PRODUC. TIVITY (S028030 001); \$14,875

TAUBMAN, PAUL, AND JUSTER, F THOMAS, DETERMINANTS OF THE DISTRIBUTION OF INCOME AND EARNINGS (SOJIJJA); 12 MONTHS \$135,300

MEYER, JOHN B: ECONOMIC RESEARCH CONFERENCE PROGRAM (SOI1875): 24 MONTHS \$67,300

FISHER, FRANKLIN M, AND SOLOW, ROBERT M; AGGREGATE PRODUCTION FUNCTIONS AND THE EXPLANATION OF WAGES (S012773): 12 MONTHS \$36,500

### NEW YORK UNIVERSITY

MACHLUP, FRITZ: KNOWLEDGE INDUSTRIES AND KNOWLEDGE OC-CUPATIONS (SOJ1887 X00); 12 MONTHS \$66,200

BAUMOL, W J. ECONOMIC POLICY FOR THE ENVIRONMENT (Sosses) X00); 12 MONTHS \$53,800

# SOCIAL SCIENCE RESEARCH COUNCIL

KLEIN, LAWRENCE R; PROJECT LINK . ECONOMETRIC MODELS (5001640 001); 24 MONTHS \$128,900

# UNIVERSITY OF ROCHESTER

FRIEDMAN, JAMES W; THEORETICAL RESEARCH IN GAME THEORY, OLIGOPOLY AND INDIVIDUAL BEHAVIOR (SOOTIES CON; 24 MONTHS \$50,000

ENGERMAN, STANLEY L; COLLABORATIVE RESEARCH ON FACTOR PRODUCTIVITY IN AMERICAN AGRICULTURE (SOFTER OOI); \$9,000 ZABEL, EDWARD; CONSUMER BEHAVIOR UNDER RISK AND

TRANSACTION COSTS (SOMOSIA): 24 MONTHS \$54,000

MADDALA, G S; ECONOMETRIC METHODS AND APPLICATIONS (SOJJJSE); 24 MONTHS \$41,200



### NORTH CAROUNA

# NORTH CAROLINA STATE UNIVERSITY AT RALEIGH

WALLACE, THOMAS D. THE MEAN SQUARED ERROR TEST FOR PARAMETER RESTRICTIONS IN ECONOMETRIC MODELS (SOJOGAS); 30 MONTHS \$60,000

#### OHIO

#### OHIO UNIVERSITY

PEJOVICH, SVETOZAR; AN ANALYSIS OF THE YUGOSLAV ECONOMIC SYSTEM (SOSIUS); 24 MONTHS \$38,800

#### PENNSYLVANIA

# CARNEGIE-MELLON UNIVERSITY

LUCAS, ROBERT E; STUDIES IN BUSINESS CYCLE THEORY (SOORTS) 001); 24 MONTHS \$63,200

CYERT, RICHARD M. AND DEGROOT, MORRIS H; BAYESIAN ANALY. SIS AND ECONOMIC THEORY (SCHOOL); 24 MONTHS \$65,000

CASS, DAVID: STUDIES IN CAPITAL AND GROWTH THEORY (SOJJJSI); 24 MONTHS \$28,700

UIRI, YUJI; FIRM SIZE DISTRIBUTIONS (SOJJJSS); 24 NONTHS \$48,000

# PENNSYLVANIA STATE UNIVERSITY

RODGERS, JAMES D; COLLABORATIVE RESEARCH ON UTILITY IN-TERDEPENDENCE, INCOME REDISTRIBUTION AND FISCAL STRUC-TURE (SOJIIII X00): 12 MONTHS \$24,100

# UNIVERSITY OF PENNSYLVANIA

SHELL, KARL; INTERTEMPORAL ECONOMICS (S002421 002); \$2,700 ANDO, ALBERT K; ECONOMETRIC ANALYSIS OF THE U.S. ECONOMY (SOIZE ZHTNOM 12 NONTHS \$46,600

#### UNIVERSITY OF PENNSYLVANIA-WHARTON SCHOOL OF FINANCE AND COMMERCE

SHELL, KARL, AND HELLER, WALTER P. INTERTEMPORAL ECONOMICS (S002121 001); 24 MONTHS \$66,500

FRIEND, IRWIN, BLUME, MARSHALL, CROCKETT, JEAN, AND DH-RYMES, PHOEBUS; PORTFOLIO BEHAVIOR OF HOUSEHOLDS AND FINANCIAL INTERMEDIARIES (SOJESIJ); 24 MONTHS \$90,000

#### RHCDE ISLAND

#### BROWN UNIVERSITY

GROSSMAN, HERSCHEL 1; INFLATION, EMPLOYMENT, AND THE THEORY OF MARKETS (SOCIATE OCE); 24 MONTHS \$29,600

## TENNESSES

# UNIVERSITY OF TENNESSEE, KNOXVILLE

FEIWEL, GEORGE R; INDUSTRIALIZATION AND CENTRAL PLANNING IN BULGARIA (S002\$70 001), \$10,200

# **VANDERBILT UNIVERSITY**

FINEGAN, T ALDRICH: LABOR MARKET CONDITIONS AND THE LABOR FORCE PARTICIPATION OF MINORITIES (SOOJISE 002): \$2,300

# TEXAS

# RICE UNIVERSITY .

LAND, JAMES W: DISTRIBUTION OF INCOME AND WEALTH IN DEVELOPING COUNTRIES (SOJISEI); 6 MONTHS \$53,150

#### TEXAS A & M UNIVERSITY

GREENHUT, M L: A THEORETICAL AND EMPIRICAL INVESTIGATION OF SPATIAL PRICING AND MARKET SIZES AND SHAPES (SOJI475); 12 MONTHS \$42,200

SAVING, T R; THE MICRO FOUNDATIONS OF MONETARY THEORY (S641995); 24 MONTHS \$46,100

BASMANN, R L, BATTALIO, R C, AND KAGEL, J H; INTERPRETATION SYSTEMS FOR EMPIRICAL ECONOMIC THEORIES (SOJJOST); 12 MONTHS \$49,000

#### UNIV OF TEXAS AT AUSTIN

KENDRICK. DAVID; STOCHASTIC CONTROL IN MACROECONOMIC MODELS (SOSEETI); 19 MONTHS \$47,200

#### VIRGINIA

# UNIVERSITY OF VIRGINIA

MCKEAN, ROLAND N; IMPLICATIONS OF DIFFERENT RESOURCE RIGHTS (S011400 X00); 12 MONTHS \$38,500

MCKEAN, ROLAND N: IMPLICATIONS OF DIFFERENT RESOURCE RIGHTS (S011400 X01); \$10,100

# VIRGINIA POLYTECHNIC INSTITUTE

MEISELMAN, DAVID I; STUDIES IN SHORT-TERM ECONOMIC FLUC-TUATIONS (SOSI 187); 15 MONTHS \$60,100

BUCHANAN, JAMES M, AND TULLOCK. GORDON; ECONOMIC ANALY-SIS OF ORDER AND DISORDER (ROSSELI XOO); 12 MONTHS \$45,000

#### WASHINGTON

# UNIVERSITY OF WASHINGTON

CHEUNG, STEVEN N B. THEORETICAL AND EMPIRICAL INVESTIGA. TIONS OF CONTRACTS (SCIOUS): 24 MONTHS \$56,800 NORTH, DOUGLASS C, AND THOMAS, ROBERT P; WESTERN

ECONOMIC GROWTH, 1500-1850 (SOSSESSE XOC); 12 MONTHS \$32,700

# UNIVERSITY OF WISCONSIN, MADISON

BALDWIN, ROBERT E: DETERMINANTS OF THE STRUCTURE OF IN-TERNATIONAL TRADE (SOJO715); 24 MONTHS \$72,400

WILLIAMSON, JEFFREY O: DOCTORAL DISSERTATION RESEARCH IN ECONOMICS (S030854); 12 MONTHS \$900

ANDREANO, RALPH LI CONFERENCE ON PROBLEMS IN ECONOMIC HISTORY (SOJISTA); 12 MONTHS \$1,900

STERN, JAMES L. DOCTORAL DISSERTATION RESEARCH IN INDUS. TRIAL RELATIONS (SOLIELT): 18 MONTHS \$5,300 BRITO, DAGOBERT L: ECONOMIC MODELS OF DISARMAMENT

(S041746); 12 MONTHS \$12,400

HESTER, DONALD D; DOCTORAL DISSERTATION RESEARCH IN ECONOMICS (SOJESPS): 12 MONTHS \$900

# SOCIOLOGY

#### CAUFORNIA

#### STANFORD UNIVERSITY

INKELES, ALEX; DOCTORAL DISSERTATION RESEARCH IN EDUCA-TION (S030345); 12 MONTHS \$5,950

COHEN, ELIZABETH G: DOCTORAL DISSERTATION RESEARCH IN EDUCATIONAL ADMINISTRATION (SOSIRIT); 12 MONTHS \$1,150

MEYER, JOHN W. AND HANNAN, MICHAEL T; INTERRELATIONSHIPS OF NATIONAL EDUCATION SYSTEMS WITH OTHER NATIONAL SOCIAL SYSTEMS (S012045); 24 MONTHS \$122,000

ZELDITCH, MORRIS JR, AND HANNAN, MICHAEL T; DOCTORAL DIS-SERTATION RESEARCH IN SOCIOLOGY (SOULES); 8 MONTHS 12,800

BERGER, JOSEPH, AND ZELDITCH, MORRIS JR; STATUS CHARAC-TERISTICS AND EXPECTATION STATES THEORY AND RESEARCH (S011182); 18 MONTHS \$93,800

# UNIVERSITY OF CALIFORNIA, BERKELEY

PAIGE, JEFFERY M; AGRARIAN SOCIAL MOVEMENTS AND THE STRUCTURE OF AGRICULTURAL EXPORT SECTORS (SOSIESS); 24 MONTHS \$56,800

STINCHONBE, ARTHUR L; DOCTORAL DISSERTATION RESEARCH IN SOCIOLOGY (SOURCE); 9 MONTHS \$5,700

# UNIVERSITY OF CALIFORNIA, LOS ANGELES

KUPER, LEO; STUDIES ON SOCIAL DISORGANIZATION (S003516 001); 12 MONTHS \$15,700

LEVINE, GENE N; DOCTORAL DISSERTATION RESEARCH IN SOCIOLOGY (SOJO218); 12 NONTHS \$1,000

KUPER, LEO; DOCTORAL DISSERTATION RESEARCH IN SOCIOLOGY (S030311); 12 MONTHS \$3,800

# UNIVERSITY OF SOUTHERN CALIFORNIA

BOOCOCK, SARANE S: DOCTORAL DISSERTATION RESEARCH IN SOCIOLOGY (SMISSY); 12 MONTHS \$950

#### COLORADU

# UNIVERSITY OF COLORADO

ELLIOTT, DELBERT; METHODOLOGICAL RESEARCH IN SOCIOMETRY (S002878 001); \$3,000

MAYER. THOMAS F; SPECTRAL THEORY AND THE ANALYSIS OF SO-CIAL CHANGE (SOJIBIJ); 24 MONTHS \$40,100

#### FLORIDA

# FLORIDA ATLANTIC UNIVERSITY

TITTLE. CHARLES R. AND SCHWARTZ, MICHAEL; SANCTIONS AND RULE BREAKING (S011744); 24 MONTHS \$100,000

#### FLORIDA STATE UNIVERSITY

WELLER, RODERT H; IN-MIGRATION AND URBAN GROWTH (S030973); 21 MONTHS \$8,700

# **ILUNOIS**

# DEPAUL UNIVERSITY

WILLIAMS, JUDITH A; IDENTIFICATION WITH OTHERS AND SOCIAL MOBILITY (SOSIEST); 24 MONTHS \$37,100

#### NATIONAL OPINION RESEARCH CENTER

DAVIS, JAMES A: A NATIONAL DATA PROGRAM FOR SOCIOLOGY (S03108# X60); 12 MONTHS \$13,800

KING, BENJAMIN: MODIFICATION OF THE NATIONAL PROBABILITY SAMPLE (S032097); 12 MONTHS \$158,000



# NORTHWESTERN UNIVERSITY

RADNOR, MICHAEL, AND ZALTMAN, GERALD; TECHNOLOGY AND THE INSTITUTIONALIZATION OF SCIENCE (SOIJBES); 24 MONTHS \$114,000

# SOUTHERN ILLINOIS UNIVERSITY - CARBONDALE

LANTZ, HERMAN B; DOCTORAL DISSERTATION RESEARCH IN SOCIOLOGY (SOISSEIS); 12 MONTHS \$3,100

# UNIVERSITY OF CHICAGO

CLARK, TERRY N; COMPARATIVE STUDY OF COMMUNITY DECISION MAKING (500)108 001): \$15,900

MCFARLAND, DAVID: DOCTORAL DISSERTATION RESEARCH IN SOCIOLOGY (SOSOSIT); 12 MONTHS \$100

MEIRR, PAUL, AND KRUSKAL, WILLIAM IS, STATISTICAL METHODOLOgy IN THE SOCIAL SCIENCES (SOSIOR X00); 12 MONTHS \$18,500

PARISH, WILLIAM L JR, AND LEVINSOHN, FLORENCE; FACTORS AF-FECTING THE SELECTION OF ARTICLES FOR SCIENTIFIC JOURNALS (SQ1978), 10 MONTHS \$2,000

SEWELL, WILLIAM H JR; SOCIAL AND POLITICAL MODERNIZATION (SOISSOO); 24 MONTHS \$38,300

LIEBERSON, STANLEY; COMPARATIVE STUDY OF MINORITIES SINCE 1880 (SOSJSLEY); 24 MONTHS \$112,000

#### INDIANA

#### INDIANA UNIVERSITY, BLOOMINGTON

POPE, WHITNEY, AND JOHNSON, BARCLAY D: AN EVALUATION AND TESTING OF DURKHEIM'S 'SUICIDE' (SGJ085J); 24 MONTHS \$25,000

#### PURDUE UNIVERSITY

PATCHEN, MARTIN, AND DAVIDSON, JAMES D. DETERMINANTS AND EFFECTS OF INTER-RACIAL INTERACTION (SOSJEST); 15 MONTHS \$75,800

#### MARYLAND

#### JOHNS HOPKINS UNIVERSITY

COLEMAN, JAMES S; THEORETICAL STUDIES OF COLLECTIVE DECI-SIONS (SOCIETY 001): 13 MONTHS \$9,200

#### ST MARY'S CITY COMMISSION

CARR, LOIS GREEN; SOCIAL STRATIFICATION IN COLONIAL AMERICA (SOSSES); 12 MONTHS \$16,500

#### MASSACHUSETTS

#### BOSTON COLLEGE

NUTTALL, RONALD L; DOCTORAL DISSERTATION RESEARCH IN SOCIOLOGY (SASASTI): 12 MONTHS \$1,500

# BRANDEIS UNIVERSITY

DEMOS, JOHN; DOCTORAL DISSERTATION RESEARCH IN SOCIOLOGY (SOISOSO); 12 MONTHS \$2,400

DENOS, JOHN; DOCTORAL DISSERTATION RESEARCH IN SOCIOLOGY (S085051); 12 MONTHS \$1,700

# HARVARD UNIVERSITY

WHITE, HARRISON C; A CALCULUS OF SOCIAL NETWORKS (S002669 001); 24 MONTHS \$108,000

GERMANI, GINO; DOCTORAL DISSERTATION RESEARCH IN SOCIOLOGY (S011878); 12 MONTHS \$3,100

REER, DAVID M; DOCTORAL DISSERTATION RESEARCH IN SOCIOLOGY (S031888); 12 MONTHS \$2.000

MOSTELLER, FREDERICK; STUDIES OF QUANTITATIVE METHODS IN THE SOCIAL SCIENCES (SOLLILY XOO); 12 MONTHS 464,000

PETTIGREW, THOMAS F; DOCTORAL DISSERTATION RESEARCH IN SOCIOLOGY (SOSSES); 12 MONTHS \$2,500

#### MICHIGAN

# UNIVERSITY OF MICHIGAN

TILLY, CHARLES; COLLECTIVE VIOLENCE IN LARGE-SCALE SOCIAL CHANGE (S002874 002); 24 MONTHS \$89,700

TANNENBAUM, ARNOLD S; DOCTORAL DISSERTATION RESEARCH IN SOCIOLOGY (S030838); 12 MONTHS 42,150

GAMSON, WILLIAM A: DOCTORAL DISSERTATION RESEARCH IN SOCIOLOGY (SOSIESE), IL MONTHS \$3,800

LAUMANN, EDWARD O; A CROSS-NATIONAL STUDY OF SOCIAL NET-WORKS AND COMMUNITY AND ORGANIZATIONAL STRATIFICATION (SOILCOOL): 24 MONTHS 472 200

FHRENKREUTZ, ANDREW S. DOCTORAL DISSERTATION RESEARCH IN SOCIOLOGY (SCISILLY), 9 MONTHS \$4.200

#### MINNESOTA

# UNIVERSITY OF MINNESOTA

CHAMBERS, CLARKE A; DOCTORAL DISSERTATION RESEARCH IN HISTORY (SOSIESD): 12 MONTHS \$2,300

## MISSISSIPPI

# UNIVERSITY OF MISSISSIPPI

DEBORD, LARRY W: THE EFFECTS OF SCHOOL MILIEUX ON ASPIRA-TIONS AND ACHIEVEMENTS OF PUPILS (SOSIEM XOO), 12 MONTHS 822.700

#### NEW HAMPSHIRE

#### DARTMOUTH COLLEGE

SOKOL, ROBERT; BEHAVIORAL CORRELATES OF STATUS INCON-SISTENCY (SOSOSIS); 24 MONTHS \$15,900

#### NEW JERSEY

# PRINCETON UNIVERSITY

STONE, LAWRENCE; CHANGES IN ENGLISH SOCIAL STRUCTURE (SOLDER XOI); 12 MONTHS \$15,700

#### **NEW YORK**

# COLUMBIA UNIVERSITY

BARTON, ALLEN H, AND GLASER, WILLIAM A: THE BRAIN DRAIN-AN INTERNATIONAL COMPARATIVE STUDY (S00888 001); \$9,900

TREIMAN, DONALD J; SOCIETAL DEVELOPMENT AND SOCIAL NO-BILITY (SOJESSO 001): \$4,800

BLAU, PETER M; COMPARATIVE ORGANIZATION RESEARCH PRO-GRAM (S028646 X01); 12 MONTHS \$85,200

BLAU, PETER: DOCTORAL DISSERTATION RESEARCH IN SOCIOLOGY (SOJIATI): 12 MONTHS \$1,400

MERTON, ROBERT K: THE SOCIOLOGY OF SCIENCE (SOSSESS X00°); 12 MONTHS 486,400

#### CORNELL UNIVERSITY

YOUNG, FRANK W; MACROSOCIAL ACCOUNTING SYSTEMS FOR DEVELOPING COUNTRIES (SORRED X01); 12 MONTHS 451,300

WILLIAMS, ROBIN M JR; DOCTORAL DISSERTATION RESEARCH IN SOCIOLOGY (SOSIITS); 12 MONTHS \$4,650 MEYER, MARSHALL W; A LONGITUDINAL STUDY OF BUREAUCRA-CIES (SOSISS); 24 MONTHS \$141,400

# GRADUATE SCHOOL AND UNIVERSITY CENTER

DOHRENWEND, BARBARA; DOCTORAL DISSERTATION RESEARCH IN SOCIOLOGY (SOIOLOT); 18 MONTHS \$3,200

# STATE UNIVERSITY AT ALBANY

LIN. NAN; COMMUNICATION FLOW AND DECISION-MAKING PROCESS IN RURAL COMMUNITIES (SOJOSZO); 12 MONTHS \$25,500

#### TEACHERS COLLEGE

KADUSHIN, CHARLES: ANALYSIS OF SOCIONETRIC DATA WITH THE AID OF COMPUTERS (SOCIETIODI): \$7,600

# OHIO

# UNIVERSITY OF CINCINNATI

JOHNSON, NORRIS; DOCTORAL DISSERTATION RESEARCH IN SOCIOLOGY (SOSSOUR): 6 MONTHS \$2,300

CARROLL, ROBERT L. DOCTORAL DISSERTATION RESEARCH IN SOCIOLOGY (SOLOGET); 12 MONTHS \$2,150

# PENNSYLVANIA

# CARNEGIE-MELLON UNIVERSITY

LAING, JAMES D; COALITIONS, BARGAINING AND PAYOFFS IN N-PERSON GAMES (SOSSIB); 24 MONTHS \$93,300

# SOUTH CAROLINA

# UNIVERSITY OF SOUTH CAROLINA

SMITH, THOMAS E; PARENTAL POWER AND INFLUENCE UPON ADOLESCENTS (S636965 X00); 12 MONTHS \$56,100

## TENNESSEE

#### VANDERBILT UNIVERSITY

GALLE, OMER R; CONTINUITIES IN INDUSTRIAL CONFLICT (SGS5276); 12 MONTHS \$36,300

# WASHINGTON

#### UNIVERSITY OF WASHINGTON

PRESTON, SAMUEL H; CAUSES OF DEATH- A SOCIAL AND DEMOGRAPHIC ANALYSIS (SOSSA64): 12 MONTHS \$29,100

# WASHINGTON STATE UNIVERSITY

FREESE, LEE; CONDITIONS FOR INHIBITING STATUS GENERALIZATIONS (S03)690); 12 MONTHS \$21,500

# WISCONSIN

# UNIVERSITY OF WISCONSIN, MADISON

KLATZKY, SHEILA R; THE INSTITUTIONALIZATION OF TRUST (SOJOJ78): 18 MONTHS \$61,700



HAGSTROM, WARREN O: STUDIES IN THE SOCIOLOGY OF SCIENCE (Sosssio X00): 12 MONTHS \$47,100

SCHWARTZ, SHALOM; DETERMINANTS OF PROSOCIAL BEHAVIOR (SOLUM XOO): 12 MONTHS \$21,700

# HISTORY AND PHILOSOPHY OF SCIENCE

#### CALIFORNIA

ACALANES UNION HIGH SCHOOL DISTRICT

DOSKEY, JOHN S; THE EUROPEAN JOURNALS OF THE GEOLOGIST. WILLIAM MACLURE (SOSO743); 12 MONTHS \$12,100

#### UNIVERSITY OF CALIFORNIA, BERKELBY

MATES, BENSON; LEIBNIZ AND THE HISTORY OF LOGIC (S002687 002): 24 MONTHS \$19,300

HEILBRON, J L: A HISTORY OF ATOMIC PHYSICS (SOSPELL XOL): 12 MONTHS \$18,000

ADAMS, BRNEST WI PROBABILISTIC ASPECTS OF DEDUCTIVE REASONING (S030364); 12 MONTHS \$29,900

FEYERABEND, PAUL X; EPISODES OF THE COPERNICAN REVOLU-TION (5041805); 18 MONTHS \$8,500

GHISELIN, MICHAEL T, IMPACT OF DARWINISM ON COMPARATIVE ANATOMY (SOUPPL): 24 MONTHS \$17,100

#### UNIVERSITY OF CALIFORNIA, LOS ANGELES

FURTH, MONTGOMERY; RESEARCH IN THE HISTORY AND PHILOSOPHY OF LOGIC (S030053); 12 MONTHS \$20,900

#### WESLEYAN UNIVERSITY

GILLMOR, C STEWART; A STUDY OF THE HISTORY OF IONOSPHERIC PHYSICS (S040821); 24 MONTHS \$29,800

AABOE, ASGER H; INVESTIGATIONS OF ANCIENT MATHEMATICAL ASTRONOMY (S003053 001); 24 MONTHS \$36,300

FRUTON, JOSEPH B; HISTORICAL STUDIES ON THE INTERPLAY OF BIOLOGY AND CHEMISTRY (SOJOSOS), 12 MONTHS \$12,400

### YALE UNIVERSITY-SCHOOL OF MEDICINE

HOLMES, FREDERIC L; DEVELOPMENT OF ORGANIC ANALYSIS AND PHYSIOLOGICAL CHEMISTRY (SOCION OOI): 2 MONTHS \$1,500

#### DISTRICT OF COLUMBIA

# CATHOLIC UNIVERSITY OF AMERICA

WALLACE, WILLIAM A: GALILEO'S JUVENILIA (SOMETS); 24 MONTHS 129,300

#### NATIONAL GRADUATE UNIVERSITY

BOEK, JEAN K: A CONFERENCE ON COPERNICUS - YESTERDAY AND TODAY' (S033967); 12 MONTHS \$14,000

### SMITHSONIAN INSTITUTION

REINGOLD, NATHAN; THE PAPERS OF JOSEPH HENRY (SON1695): 2A MONTHS \$62,000

#### ILLINOIS

### UNIVERSITY OF CHICAGO

SHAPERE, DUDLEY; RATIONALE OF SCIENTIFIC DEVELOPMENT (S003094 001); \$8,100

SCHAFFNER, KENNETH F; DEVELOPMENT OF THE OPERON THEORY (S003099 001); 12 MONTHS \$6,800

BAKER, KEITH M; DOCTORAL DISSERTATION RESEARCH IN HISTO-RY AND PHILOSOPHY OF SCIENCE (SOJOISO): 19 MONTHS \$1.600

STOCKING, GEORGE W JR; THE HISTORY OF BRITISH ANTHROPOLO-GY- 1890-1910 (S018273): 12 MONTHS \$5,500

# UNIVERSITY OF ILLINOIS AT CHICAGO CIRCLE

TELLER, PAUL R; BIOLOGICAL SPECIES CLASSIFICATION (SOSJESS); 12 MONTHS \$5.200

# INDIANA

### INDIANA UNIVERSITY, BLOOMINGTON

THOREN, VICTOR E; TYCHO BRAHE'S COSMOLOGICAL RESEARCHES AND IDEAS (S002928 001); 12 MONTHS \$13,700

GRANT, EDWARD; THE CONCEPT AND ROLE OF VOID SPACE IN THE HISTORY OF MEDIEVAL PHYSICS AND COSMOLOGY (S030658); 2A MONTHS \$23,000

DUNN, J MICHAEL, AND MEYER, ROBERT K; PROBLEMS OF LOGICAL IMPLICATION (SOJ\$708): 24 MONTHS \$30,600

# UNIVERSITY OF MARYLAND, COLLEGE PARK

BRUSH, STEPHEN G; PROBLEMS IN THE HISTORY OF MODERN PHYSICAL SCIENCE (S002475 001); 24 MONTHS \$24,600

#### MASSACHUSETTS

#### AMBRICAN ACADEMY OF ARTS AND SCIENCES

OLESON, ALEXANDRA; CONFERENCE ON THE HISTORY OF AMER-ICAN SCIENTIFIC SOCIETIES (SOUPER); 12 MONTHS \$15,800 EDSALL, JOHN T: CONFERENCE ON THE HISTORICAL DEVELOP-MENT OF BIOENERGETICS (SOJSES); 18 MONTHS \$11,500

#### HAMPSHIRE COLLEGE

GOLDBERG, STANLEY: ASPECTS OF RESPONSE TO EINSTEIN'S SPE-CIAL THEORY OF RELATIVITY (SOSIESS): 12 MONTHS \$27,000

#### HARVARD INIVERSITY

COHEN, I BERNARD; THE SCIENTIFIC THOUGHT OF ISAAC NEWTON (S000063 XO3); 12 MONTHS \$19,800

MURDOCH, JOHN E: EARLY HISTORY OF THE MEASUREMENT OF MOTION (SO08815 X01); 12 MONTHS \$14,700

MAYR, ERNST, A HISTORY OF THE MAJOR PROBLEMS OF BIOLOGY (S032176); 84 MONTHS \$38,800

MENDELSOHN. EVERETT: DOCTORAL DISSERTATION RESEARCH IN THE HISTORY OF SCIENCE (S033964): 12 MONTHS \$1,800

#### MICHIGAN

#### UNIVERSITY OF MICHIGAN

STENECK, NICHOLAS H; EARLY DEVELOPMENTS IN ASTRONOMY (S033685); 12 MONTHS \$6,300

#### MISSOURI

#### WASHINGTON UNIVERSITY

ALLEN, GARLAND E: THE EMBRYOLOGICAL, EVOLUTIONARY, AND GENETIC WORK OF THOMAS HUNT MORGAN (SOOF145 001): 12 MONTHS \$17,600

#### **NEW JERSEY**

#### PRINCETON UNIVERSITY

GILLISPIE, CHARLES C: DOCTORAL DISSERVATION RESEARCH IN HISTORY OF SCIENCE (SOJOJJS); 12 MONTHS \$500

RORTY, RICHARD; PSYCHOLOGY AND ANTI-CARTESIAN PHILOSO-PHIES OF MIND (SOIJ489); 24 MONTHS \$14,800

GLYMOUR, CLARK; ASPECTS OF THEORETICAL EQUIVALENCE (SOJJJ99); 14 MONTHS \$10,400

HARMAN, GILBERT H; LINGUISTICS AND THE SEMANTICS OF NATU-RAL LANGUAGE (SOJANO): 18 MONTHS \$17,400

#### COLLEGE AT NEW PALTZ

HUANG, RAY, DEVELOPMENT OF SCIENCE IN TRADITIONAL CHINA (S033511): 12 MONTHS \$11.100

# CORNELL UNIVERSITY

ADELMANN, HOWARD B: MALPIGHI'S CONTRIBUTIONS TO ANATOMY AND PHYSIOLOGY (SOLTIOL XOI): 12 MONTHS \$24,500

# NEW YORK UNIVERSITY

BIRNBAUM, ALLAN; RESEARCH ON METHODOLOGICAL PROBLEMS IN STATISTICS (SOJOTOS); 6 MONTHS \$6,100

### STATE UNIVERSITY AT BINGHAMTON

TOULMIN. STEPHEN E, AND MISCHEL, THEODORE; CONFERENCE ON PERSON PERCEPTION AND INTERPERSONAL BEHAVIOR (SOS1335); 12 MONTHS \$5,500

# STATEN ISLAND COMMUNITY COLLEGE

ERLICHSON. HERMAN; ETHER THEORY AND THE SPECIAL THEORY OF RELATIVITY (S0J0625); 9 MONTHS \$5,300

# UNIVERSITY OF ROCHESTER

LEHRER, KEITH E; THE APPLICATION OF INDUCTIVE RULES IN SCIENTIFIC EXPLANATION AND RATIONAL ACCEPTANCE (SOGIOSE 001); 12 MONTHS \$18,800

# OHIO

# OHIO STATE UNIVERSITY

BELKIN, JOHANNA 8, AND CALEY, EARLE R; EARLY GERMAN MEDI-CAL AND CHEMICAL WORKS (S040487 001); \$6,300

# **PENNSYLVANIA**

# FRANKLIN INSTITUTE

LEVITT, I M; A SYMPOSIUM TO COMMEMORATE THE LOOTH AN-NIVERSARY OF THE BIRTH OF JOHANN KEPLER (SOJONI); 12 MONTHS \$10,900

HILKER, EMERSON. AND SINCLAIR, BRUCE; HISTORICAL RECORDS OF THE FRANKLIN INSTITUTE (SOSSIA); 12 MONTHS \$30,000

#### SWARTHMORE COLLEGE

HAWKINS, THOMAS W JR; THE HISTORY OF MATRIX THEORY (Sossiss); 12 MONTHS \$4,000



#### UNIVERSITY OF PENNSYLVANIA

JEFFREY, RICHARD C; A THEORY OF PREFERENCE (S003097 001); 12 MONTHE \$9.300

MCCORMMACH, RUSSELL K; DOCTORAL DISSERTATION RESEARCH IN HISTORY OF SCIENCE (S010889); 12 MONTHS \$1,300 MCCORMMACH, RUSSELL K; A HISTORY OF THE PHYSICS

DISCIPLINE 1180-1814 (SOU 1018); 84 MONTHS \$36,700

#### UNIVERSITY OF PITTSBURGH

GRUNBAUM, ADOLF; PHILOSOPHICAL PROBLEMS OF SPACE-TIME (SOCIET 601); 18 MONTHS \$16,500

#### WASHINGTON

# UNIVERSITY OF WASHINGTON

HANKINS, THOMAS L; SIR WILLIAM ROWAN HAMILTON'S CONTRIBU-TIONS TO SCIENCE (5004701 008); 12 MONTHS \$5,000

MOFFETT, BENJAMIN C JR; COMPLETION OF STUDY ON THE DUTCH ANATOMIST, LOUIS DE BILS (1684-1689) (SOSOMO): 12 MONTHS \$700 BLOAN, PHILLIP R; COLLABORATIVE RESEARCH ON A HISTORY OF

## WISCONSIN

#### MARQUETTE UNIVERSITY

ZUPKO, RONALD E; EARLY ITALIAN AND FRENCH WEIGHTS AND MEASURES (SOS) 3866); & MONTHS \$9,300

## UNIVERSITY OF WISCONSIN, MADISON

TAXONOMY (SOSSTES): 24 MONTHS \$5,200

DAUB, E E; THE CLAUSIUS-TYNDALL CORRESPONDENCE (SG33343); 24
MONTHS \$13,400

SIEGFRIED, ROBERT; BIOGRAPHY OF SIR HUMPHRY DAVY (SOSJOST); 18 MONTHS \$9,100

# University of Wisconsin, Milwaukee

HULL, DAVID L; COLLABORATIVE RESEARCH ON A HISTORY OF TAXONOMY (SOSJEEJ); 24 MONTHS \$14,700

# SPECIAL PROJECTS AND RESOURCES

#### CALIFORNIA

#### CALIFORNIA INSTITUTE OF TECHNOLOGY

THOMPSON, FREDERICK B; THE IMPLEMENTATION OF AN AD-VANCED COMPUTER SYSTEM FOR SOCIAL SCIENCE RESEARCH (JOJISTY): 9 MONTHS \$28,000

#### CENTER FOR ADV STUDY IN THE BEHAVIORAL SCIENCE

CUTLER, PRESTON S; SPECIAL PROGRAM OF RESEARCH SEMINARS AND CONFERENCES TO BE CONDUCTED BY THE MATHEMATICAL SO-CIAL SCIENCE BOARD (5003#34 001); 12 MONTHS \$222,000

CUTLER, PRESTON S; ADVANCED STUDY AND RESEARCH IN SOCIAL SCIENCES (SOSSIS XO): 12 MONTHS \$92,800

#### STANFORD UNIVERSITY

FERGUSON, CHARLES A, AND GREENBERG, JOSEPH H; ARCHIVAL RESEARCH ON LANGUAGE UNIVERSALS (SOOM) 1 001); 8 MONTHS \$20,700 CLARK, EVE V; THE ACQUISITION OF SEMANTIC DISTINCTIONS IN CHILDREN'S SPEECH (SOGM) 20 MONTHS \$85,100

FERGUSON, CHARLES A: COMPARATIVE RESEARCH ON THE ACQUISITION OF PHONOLOGY (SOJOBER): 24 MONTHS \$163,500

# UNIVERSITY OF CALIFORNIA, BERKELEY

WANG, WILLIAM S.Y, AND OHALA, JOHN; PROGRAM OF RESEARCH ON THE PROCESSES OF PHONOLOGICAL CHANGE (S002386 001); 24 MONTHS \$250,500

APPLEYARD, DONALD, AND CRAIK, KENNETH; ENVIRONMENTAL DISPOSIT; AND THE SIMULATION OF ENVIRONMENTS (S040984 X00°); 12 h. . 'THS \$360,020

SLOBIN, DAN 1; DOCTORAL DISSERTATION RESEARCH IN LIN-GUISTICS (SOSI687), 12 MONTHS 86,000

BALDERSTON, F E; OPERATION OF A MANAGEMENT SCIENCE RESEARCH FACILITY (SOSIISE'); 12 MONTHS \$170,100

# UNIVERSITY OF CALIFORNIA, LOS ANGELES

MARVICK, DWAINE; AN 'ARCHIVAL TAPE VOLUME' APPROACH TO SOCIAL SCIENCE DATA DISSEMINATION (SOSIESI); 24 MONTHS \$11.400

### CONNECTICUT

# HUMAN RELATIONS AREA FILES

FORD, C S; THIRD HRAF CONFERENCE ON CROSS-CULTURAL RESEARCH (SOJ1186): 12 MONTHS \$9,400

# DISTRICT OF COLUMBIA

## NONE; OTHER PROGRAM AWARDS (01AWDS); \$2,949

## CENTER FOR APPLIED LINGUISTICS

ROBERTS, A HOOD; CONFERENCE ON RESEARCH TRENDS IN COM-PUTATIONAL LINGUISTICS (SOSSESS); 6 MONTHS \$17,000

#### GALLAUDET COLLEGE

STOKOE, WILLIAM C JR; SEMANTICS AND GRAMMAR IN AMERICAN SIGN LANGUAGE (SCI1546): 24 MONTHS \$78,700

# MARYLAND

#### JOHNS HOPKINS UNIVERSITY

GARVEY, CATHERINE; DISCOURSE ANALYSIS OF TWO-PERSON PROBLEM-SOLVING COMMUNICATION (SOSIAIS); IS MONTHS \$33,000

#### **MASSACHUSETTS**

# HARVARD UNIVERSITY

KUNO, SUSUMU; RESEARCH IN FORMAL LINGUISTICS (SOSSESS X00); 12 MONTHS \$18,800

#### MICHIGAN

#### UNIVERSITY OF MICHIGAN

LAKOFF, GEORGE; GENERATIVE SEMANTICS (SOCIAL) 001); 24 MONTHS \$49,100

CLUBB, JEROME M, AND GREW, RAYMOND; COMPARATIVE DATA ACQUISITION FOR THE INTER-UNIVERSITY CONSORTIUM FOR POLITICAL RESEARCH (SOSOSS); 12 MONTHS \$37,500

FRIEDMAN, JOYCE; COMPUTER AIDS TO LINGUISTIC RESEARCH (SOSIJOS); 24 MONTHS \$17,700

HOFFERBERT, RICHARD I, AND JENNINGS, M KENT; ACQUISITION AND PROCESSING OF SURVEY DATA FOR THE INTER-UNIVERSITY CONSORTIUM FOR POLITICAL RESEARCH (SOJIESE); 24 MONTHS \$199,800

#### NEW JERSEY

### INSTITUTE FOR ADVANCED STUDY

GEERTZ, CLIFFORD; ADVANCED STUDY ON THE PROCESSES OF SO-CIAL CHANGE (SOS1730 X00): 12 MONTHS \$31,000

#### NEW YORK

## CORNELL UNIVERSITY

KELLY, BURNHAM; CROSS-NATIONAL STUDY OF THE SOCIAL ASPECTS INVOLVED IN INDUSTRIALIZED PRODUCTION APPROACHES TO HOUSING (SO10384); 24 MONTHS \$76,400

GRIMES, JOSEPH E. COLLABORATIVE RESEARCH IN DEVELOPMENT OF A LINGUISTIC FIELD-DATA ARCHIVE (SOJIEDS), 24 MONTHS \$28,600

#### NATIONAL BUREAU OF ECONOMIC RESEARCH

MEYER, JOHN, AND KUH, EDWIN; RESEARCH CENTER FOR THE DEVELOPMENT OF COMPUTER TECHNOLOGY IN ECONOMICS AND MANAGEMENT SCIENCE (Jobiis Xoi); \$413,600

# QUEENS COLLEGE

CAIRNS, CHARLES E; THEORY OF PHONOLOGICAL AND PHONETIC UNIVERSALS (S050047); 12 MONTHS \$7,000

#### OHIO

### OHIO STATE UNIVERSITY

LEHISTE, ILSE; LINGUISTIC UNITS AND BOUNDARIES (SOJI 404); 12 MONTHS \$24,300

# OKLAHOMA

# UNIVERSITY OF OKLAHOMA

MORRISON, JACK L, ANDREE, RICHARD V, AND SWEENEY, JAMES W; COLLABORATIVE RESEARCII IN DEVELOPMENT OF A LINGUISTIC FIELD-DATA ARCHIVE (S001405 001); 24 MONTHS \$127,100

#### PENNSYLVANIA

### CARNEGIE-MELLON UNIVERSITY

ROSENTHAL, HOWARD L; EMPIRICAL POLITICAL THEORY (S002945 002); \$3,000

# LEHIGH UNIVERSITY

RUBENSTEIN, HERBERT; EXPERIMENTAL STUDIES OF LEXICAL MEMORY (SOSPERO XOD): 12 MONTHS \$26.700

## REGIONAL SCIENCE RESEARCH INSTITUTE

STEVENS, BENJAMIN H; USE, PERCEPTION, AND VALUE OF URBAN OPEN SPACE (S032072); 24 MONTHS \$80,000

# UNIVERSITY OF PENNSYLVANIA

BENSON, LEE; COLLABORATIVE RESEARCH ON ARCHIVAL STUDIES OF VOTING BEHAVIOR (S002878 001); \$4,700

HARRIS, ZELLIG S, AND JOSHI, ARAVIND K; AN ALGORITHM FOR A TRANSFORMATIONAL ANALYSIS OF ENGLISH SENTENCES (SOME SOME); 12 MONTHS \$24,000

# TEXAS

# UNIV OF TEXAS AT AUSTIN

LEHMANN, W P; THEORETICAL INVESTIGATION OF DIACHRONIC SYNTAX (S003081 001); 12 MONTHS \$37,200

PETERS, STANLEY, THEORETICAL INVESTIGATION OF TRANSFORMATIONAL GRAMMAR (SOSPILL); 24 MONTHS \$47,700



# GEOGRAPHY

#### CALIFORNIA

UNIVERSITY OF CALIFORNIA, LOS ANGELES

SAUER, JONATHAN D; DOCTORAL DISSERTATION RESEARCH IN GEOGRAPHY (SOJOCIO); 12 MONTHS \$1,350

UNIVERSITY OF COLORADO

WRITE, GILBERT F: COLLABORATIVE RESEARCH ON NATURAL HAZARDS (SOORERS XOLK IR MONTHS \$27,000

#### DISTRICT OF COLUMNIA

ASSOCIATION OF AMERICAN GEOGRAPHERS

NYSTRON, J WARREN; GEOGRAPHICAL STUDIES OF SELECTED URBAN PROBLEMS (SOJIJO7): 24 MONTHS \$410,500

UNIVERSITY OF FLORIDA

CRIST, RAYMOND E; DOCTORAL DISSERTATION RESEARCH IN GEOG-RAPHY (SOS1#3#); 12 MONTHS \$760

#### ILLINOIS

NORTHWESTERN UNIVERSITY

DACEY, MICHAEL F; METHODS OF EMPIRICAL SPATIAL ANALYSIS (S002967 001); 24 MONTHS \$89,900

BERRY, BRIAN J L; DUALITY IN CHICAGO'S HOUSING MARKET (SOESSES XOI); 12 MONTHS \$15,600

#### **HOWA**

UNIVERSITY OF IOWA

RUSHTON, GERARD; DOCTORAL DISSERTATION RESEARCH IN GEOG-RAPHY (S0J4071); 12 MONTHS \$3,500

# KANSAS

UNIVERSITY OF KANSAS

NUNLEY, ROBERT E; SPATIAL DISTRIBUTION COMPUTER FOR GEO-GRAPHICAL ANALYSIS (SO29859 XOI); 12 MONTHS \$50,000

#### MASSACHUSETTS

CLARK UNIVERSITY

KATES, ROBERT W; COLLABORATIVE RESEARCH ON NATURAL HAZARDS (5001184 001); \$7,500

# MICHIGAN

UNIVERSITY OF MICHIGAN WARNER, SAM BASS JR; DOCTORAL DISSERTATION RESEARCH IN HISTORY (S030044), 16 MONTHS \$3,100

TOBLER, WALDO R; GEOGRAPHICAL PATTERNS OF INTERACTION (SOJ,070 X00); 12 MONTHS \$57,500

# PENNSYLVANIA

UNIVERSITY OF PENNSYLVANIA

WOLPERT, JULIAN; CONFLICT OVER LOCATIONAL ISSUES (S002138 001): 24 MONTHS \$117,900

WOLPERT, JULIAN; CONFLICT OVER LOCATIONAL INSUES (SOC2758 002); \$2,442

# WASHINGTON

UNIVERSITY OF WASHINGTON

MORRILL, RICHARD L. EXPERIMENTAL DERIVATION OF THEORETI-CAL SURFACES (SOC285J 001); 21 KONTHS \$34,200

THOMAS, MORGAN D; GROWTH POLES AND REGIONAL DEVELOP-MENT (S027731 001); 24 MONTHS \$100,000

UNIVERSITY OF WISCONSIN, PARKSIDE

CAMPBELL, JOHN, STRUCTURE OF INDUSTRIAL RELATIONSHIPS IN A GROWTH POLE CONTEXT (SOJOJJ4), 24 MONTHS \$21,000

# POLITICAL SCIENCE

# CALIFORNIA

STANFORD UNIVERSITY

MCALISTER, JOHN T JR; C ISE STUDY OF THE PROCESS OF SOCIAL CHANGE (S030348); 12 MONTHS \$30,700

GEORGE, ALEXANDER L; STUDY OF DETERRENCE THEORY (S030406); 15 MONTHS \$40,600

EULAU, HEINZ: DOCTORAL DISSERTATION RESEARCH IN POLITI-CAL SCIENCE (SOME); 18 MONTHS \$3,700

# UNIVERSITY OF CALIFORNIA, BERKELEY

WILDAYSKY, AARON; PROCESS MODELS OF EXPENDITURE PREDIC-TION (SOJO180); 24 MONTHS \$45,500

## COLORADO

UNIVERSITY OF DENVER

BAYLEY, DAVID H; COMPARATIVE ANALYSIS OF NATIONAL POLICE SYSTEMS (SOJJOSJ); 24 MONTHS \$13,400

# CONNECTICUT

UNIVERSITY OF CONNECTICUT

KOGAN, NORMAN; DOCTORAL DISSERTATION RESEARCH IN POLITI-CAL SCIENCE (SOJOISS); 12 MONTHS \$1,950

WESLEYAN UNIVERSITY

GREENSTEIN, FRED I; COMPARATIVE STUDY OF POLITICAL ORIEN-TATIONS (SOJOTIA): 12 MONTHS \$8.300

YALE UNIVERSITY

MAYHEW, DAVID R; VARIATION IN AGGREGATIVE CAPACITIES AMONG PARTY SYSTEMS (SOJIEU); 12 MONTHS \$8,300 BERNSTEIN, THOMAS P. EDUCATION AND MODERNIZATION IN

CHINA (SOJJJ78); 14 MONTHS \$9,600

## DISTRICT OF COLUMBIA

Johns Hopkins University-School of Advanced INTERNATIONAL STUDIES

CORSON, WALTER H: MEASUREMENT OF CONFLICT AND COOPERA-TION (S031994); 12 MONTHS \$11,200

#### SIONIMI

NORTHWESTERN UNIVERSITY

GURR, TED ROBERT; CAUSES OF CIVIL STRIFE (SGJ0674); 24 MONTHS \$24,800

GURR, TED R; CAUSES OF CIVIL STRIFE (S0J0674 001); \$400 JACOB, HERBERT; A COMPARATIVE STUDY OF THE DISPOSITION OF FELONY CASES (S031965 X00°); 12 MONTHS \$60,400

UNIVERSITY OF CHICAGO

VERBA, SIDNEY; DOCTORAL DISSERTATION RESEARCH IN POLITI-CAL SCIENCE (SOJIJST); 24 MONTHS \$5,000

UNIVERSITY OF ILLINOIS AT URBANA

DAVIS, MORRIS; INTERNATIONAL RELIEF AS A POLITICAL PROCESS (S031333); 24 MONTHS \$30,100

## **KWWA**

BOYNTON, G R: OTHER PROGRAM AWARDS (OIAWDS); 24 MONTHS

UNIVERSITY OF IOWA

KIM, CHONG L, AND GREEN, JUSTIN J; LEGISLATIVE RECRUITMENT IN A ONE PARTY STATE (SOJOL" : 12 MONTHS \$15,500

BOYNTON, G R, AND LOEWENBERG, GERHARD; ANALYSIS OF GER-MAN PUBLIC OPINION DATA (S030890); 12 MONTHS \$46,400

MCCRONE, DONALD J. DOCTORAL DISSERTATION RESEARCH IN POLITICAL SCIENCE (SOLITIES); 12 MONTHS \$2,550

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

BURNHAM, WALTER DEAN; A COLLABORATIVE INVESTIGATION OF LONGITUDINAL DIMENSIONS OF AMERICAN ELECTORAL BEHAVIOR (S0J03J6), 24 MONTHS \$57,300

BERGER, SUZANNE; DOCTORAL DISSERTATION RESEARCH IN POLITICAL SCIENCE (SG12780); 16 MONTHS \$1,850

HIBBS, DOUGLAS A JR; COMPARATIVE STUDY OF CONFLICT (SOSJIEI); 18 MONTHS \$49,600

#### **MICHIGAN**

MICHIGAN STATE UNIVERSITY

GRIMES, ALAN P; DOCTORAL DISSERTATION RESEARCH IN POLITI-CAL SCIENCE (S030832), 12 MONTHS \$1,060

UNIVERSITY OF MICHIGAN

ELDERSVELD, SAMUEL J. COMPARATIVE STUDY OF PUBLIC AD-MINISTRATORS (SOCIED XOI): 12 MONTHS \$92,500

SINGER, J DAVID, CORRELATES OF INTERNATIONAL WAR (SOIS) X01); 12 MONTHS \$50,800

LANGTON, KENNETH; DOCTORAL DISSERTATION RESEARCH IN POLITICAL SCIENCE (S030878); 12 MONTHS \$5,200

JENNINGS, M KENT; THE DYNAMICS OF POLITICAL ORIENTATIONS

(S011850); 30 MONTHS \$155,400 PARK, RICHARD, DOCTORAL DISSERTATION RESEARCH IN POLITI-

CAL SCIENCE (SOJJEET); 12 MONTHS \$1,400 PUTNAM, ROBERT D; REGIONAL GOVERNMENT IN ITALY (SOSSEIO); 12

MONTHS \$32,900



manner.

MILLER. WARREN E; ELECTORAL BEHAVIOR AND THE MEANING OF POLITICS (SOJJESE"). 24 MONTHS \$100,000

#### MINNESOTA

UNIVERSITY OF MINNESOTA

BAILEY, FREDRIC N, AND HOLT, ROBERT T: THE ANALYSIS OF COM-PLEX SOCIAL SYSTEMS (5002955 001); 24 MONTHS \$274,300

### MISSOURI

**WASHINGTON UNIVERSITY** 

SHEPSLE, KENNETH A: UNCERTAINTY. SOCIAL CHOICE, AND ELEC-TORAL COMPETITION (SOSJOSJ); 14 MONTHS \$21,200

#### **NEW HAMPSHIRE**

UNIVERSITY OF NEW HAMPSHIRE, DURHAM

SCHULZ, ANN TIDIRECTED POLITICAL CHANGE AND POLITICAL AT-TITUDES (\$034181): 12 MONTHS \$6,000

#### NEW JERSEY

PRINCETON UNIVERSITY

BLACK, CYRIL E; DOCTORAL DISSERTATION RESEARCH IN POLITICS (S031156); 9 MONTHS \$1,700

#### **NEW YORK**

COLLEGE AT CORTLAND

LEON. DONALD E; COLLABORATIVE RESEARCH ON PROFES-SIONALIZATION (SOCIETA 001); 12 MONTHS \$7,400

EDINGER, LEWIS J; ELITE SOCIALIZATION IN THE MODERN DEMOCRATIC STATE (S018086 X01); 7 MONTHS \$10,900

OKSENBERO, MICHEL: DOCTORAL DISSERTATION RESEARCH IN POLITICAL SCIENCE (SOJOOP4): 12 MONTHS \$3,300

ROTHMAN, DAVID J; HISTORICAL ANALYSIS OF ELECTORAL PROCESSES (SOJO277); 24 MONTHS \$11,300

STATE UNIVERSITY AT BUFFALO

NARDIN, TERRY; CONCEPTUAL PROBLEMS IN THE THEORY OF VIOLENCE (S033144): 12 MONTHS \$5,100

### NORTH CAROUNA

UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

SEARING, DONALD D; COLLABORATIVE RESEARCH ON COMPARA-TIVE SOCIALIZATION (S028090 X01); 8 MONTHS \$35,500

UNIVERSITY OF OREGON - EUGENE

DAVIES, JAMES C; DOCTORAL DISSERTATION RESEARCH IN POLITI-CAL SCIENCE (S029691 001); 12 MONTHS \$1,100

CARNEGIE-MELLON UNIVERSITY

ROSENTHAL, HOWARD L; METHODOLOGICAL DEVELOPMENTS IN EMPIRICAL POLITICAL SCIENCE (SOJJ754); 24 MONTHS \$70,000

UNIV OF TEXAS AT AUSTIN

FRÖHLICH, NORMAN, OPPENHEIMER, JOE A, AND YOUNG, ORAN R; EXCHANGE THEORY OF POLITICS (SOSJ 190); 24 MONTHS \$40,000

### VERMONT

MIDDLEBURY COLLEGE

LENG, RUSSELL J; CONFLICT BEHAVIOR AND INTERNATIONAL WAR (S033130); 24 MONTHS \$33,500

### OTHER SOCIAL SCIENCE PROGRAMS

ARIZONA STATE UNIVERSITY

MORRIS, JOHN P; REGULATORY IMPLICATIONS OF ORGANIZED RECREATIONAL ACTIVITY (SOSIELL); 15 MONTHS \$43,000

### CALIFORNIA

CALIFORNIA STATE UNIVERSITY, SAN DIEGO

FEIERABEND, IVO K, FEIERABEND, ROSALIND L, AND NESVOLD, BETTY A; SYSTEMIC CONDITIONS OF POLITICAL AGGRESSION (S002458 002): 8 MONTHS \$24,700

STANFORD UNIVERSITY

MISCHEL, WALTER: SOCIAL LEARNING AND COGNITIVE PROCESSES IN SELFREACTIONS (S032582); 24 MONTHS \$19,900

FRIEDMAN, LAWRENCE M: COMPARATIVE STUDY OF TRIAL COURTS (S033881), 15 MONTHS \$63,600

### UNIVERSITY OF CALIFORNIA, BERKELEY

SHANKS, J MERRILL; DEVELOPMENT OF MODEL SOCIAL INDICA-TORS (SOLIELE); 24 MONTHS \$586,100

WOODSON, M I CHARLES E; DOCTORAL DISSERTATION RESEARCH

IN SOCIAL PSYCHOLOGY (SOSSIGE): 4 MONTHS 41,800
EISENBERG, MELVIN A: NEGOTIATION AS RATIONAL DISPUTE RESOLUTION PROCESS (SOJISSS); 12 MONTHS \$46,100

### UNIVERSITY OF CALIFORNIA, IRVINE

ROMNEY, A KIMBALL: COLLABORATIVE RESEARCH ON UNIFORM MEASURES OF SOCIAL COMPETENCE (SOSJO49); 24 MONTHS \$25.400

UNIVERSITY OF CALIFORNIA, LOS ANGELES

KELLEY, HAROLD H; INTERPERSONAL RELATIONS WITHIN THE FAMILY (SOSJOOF XOO); 12 MONTHS \$49,100

KANOUSE, DAVID E; ATTITUDINAL AND BEHAVIORAL EFFECTS OF INTERVIEWING (SOJJESI); 12 MONTHS \$17,000

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

EKMAN, PAUL; THE FEASIBILITY OF STUDYING THE INTRODUCTION OF TELEVISION IN SOUTH AFRICA (SOSPORS); 2 MONTHS \$3,900

### UNIVERSITY OF CALIFORNIA, SANTA BARBARA

MCCLINTOCK, CHARLES G. AND MESSICK, DAVID M; SOCIAL MOTIVA-TION AND INTERDEPENDENCE (SOOJOSI 001); 12 MONTHS \$14,900

### UNIVERSITY OF SOUTHERN CALIFORNIA

JOHNSON, EARL J; SOCIAL ECONOMIC IMPACT OF LEGAL PRACTICE AND ALTERNATIVE APPLICATIONS OF LEGAL SKILLS (SOJIES); 16 MONTHS \$54,800

STONE, CHRISTOPHER D: RELATIONSHIPS BETWEEN CORPORATE STRUCTURE AND EFFICACY OF LAWS (SOJ\$886); 18 MONTHS \$71,500

UNIVERSITY OF DENVER

WALLACE, JAMES E; RESEARCH WORKSHOP ON THE ROLE OF ETHICS IN THE LEGAL SYSTEM (SOSLED); 9 MONTHS \$7,600

UNIVERSITY OF CONNECTICUT

FARINA, AMERIGO; EFFECTS OF DEVIANCE ON INTERACTION (SOJ1020 X00), 12 MONTHS \$24,300

YALE UNIVERSITY

JANIS, IRVING L, AND MILLER, JAMES C; INFLUENCE OF DYADIC RELATIONSHIPS ON ADHERENCE TO STRESSFUL DECISIONS (S030314 X00); 12 MONTHS \$46,600

## DISTRICT OF COLUMBIA

AMERICAN SOCIETY OF INTERNATIONAL LAW

LEIVE, DAVID M; LAW-RELATED RESEARCH ON THE INTERNA-TIONAL REGULATION OF SPECIALIZED ACTIVITIES (SOJOO41); 24 MONTHS \$176,100

AMERICAN UNIVERSITY

DIENES, C THOMAS, AND BURKE, D BARLOW; PROCESSES FOR DISPUTE SETTLEMENT (SOJOOLJ); 18 MONTHS \$24,400

BUREAU OF SOCIAL SCIENCE RESEARCH INC

FLAX, MICHAEL J, AND GARN, HARVEY A; KINOSTATISTICS FOR SO-CIAL INDICATORS- AN EXPLORATORY STUDY (5029115 001); 6 MONTHS

## GEORGE WASHINGTON UNIVERSITY

MORSS E R; CONFERENCE ON GOVERNMENT-SUPPORTED RESEARCH ON SOCIAL INDICATORS (SOJO168), 12 MONTHS \$14,400

### URBAN INSTITUTE

FLAX, MICHAEL, AND GARN, HARVEY; SOCIAL AND URBAN INDICA-TORS (S029710 X01): 12 MONTHS \$159,800

ORCUTT, GUY H; COLLABORATIVE RESEARCH ON THE DISTRIBU-TION OF INCOME AND WEALTH WITH MICROSIMULATION APPLICA-TIONS (SQLIOSI); 12 MONTHS \$117,700

### HAWAH

UNIVERSITY OF HAWAII

PITTS, FORREST R; NATIONWIDE FACTORIAL URBAN ECOLOGY STUDY OF KOREA (SOJOSIZ); 24 MONTHS \$25,000

### ILLINOIS

NORTHWESTERN UNIVERSITY

CAMPBELL, DONALD T: MEASUREMENT AND EXPERIMENTATION IN SOCIAL SETTINGS (S030273 X00); 12 MONTHS \$69,300

JACOB, HERBERT; A COMPARATIVE STUDY OF THE DISPOSITION OF FELONY CASES (S033965 X00°); 12 MONTHS \$39,800

UNIVERSITY OF CHICAGO

DUNCAN, STARKEY; STRUCTURAL STUDY OF FACE-TO-FACE COM-MUNICATION (SOCIOLS DOI): 24 MONTHS \$64,500 KATZ, STANLEY N; RESEARCH CONFERENCE ON LAW AND

ECONOMIC DEVELOPMENT IN U.S. (SOJJJ41); 6 MONTHS \$4,300



ZEIBEL, HANB, ANALYSIS OF THE TRADITIONAL VOIR DIRE SYSTEM DOBESS BHTHOM BI (CORNEDE)

University of Illinois at Urbana

OSGOOD, CHARLES E: COMPARATIVE PSYCHOLINGUISTICS (SOMOIR

X01): 18 MONTHS \$1,200 DAVIB, JAMES R; INDIVIDUAL - GROUP PROBLEM SOLVING (S008?47 001): \$4 MONTHS \$56,700

DAVIB, JAMES H; INDIVIDUAL GROUP PROBLEM SOLVING (SOMTH) 004): \$19,660

HUNT, J MCVICKER; DOCTORAL DISSERTATION RESEARCH IN PSYCHOLOGY (SOLIEDA); 12 MONTHS \$1,700

HULIN, CHARLES L; EFFECTS OF ORGANIZATIONAL AND IN-DIVIDUAL VARIABLES ON ATTITUDE AND BEHAVIOR (SOSPOR); 24 MONTHS \$43,700

### INDIANA

PURDUE UNIVERSITY

BYRNB, DONN; A REINFORCEMENT MODEL OF INTERPERSONAL AT-TRACTION-EXTENSIONS AND APPLICATIONS (S004764 001); 24 MONTHS . \$71,600

### KANSAS

KANSAS STATE UNIVERSITY

PHABES, E JERRY; LOCUS OF CONTROL AND RESPONSIBILITY AT-TRIBUTION (SOSSESS XOO); 12 MONTHS \$21,600

KIESLER, CHARLES A; COMMITMENT AND ATTITUDE CHANGE (S/M9788 X01); 12 MONTHS \$43,500

#### MARYLAND

JOHNS HOPKINS UNIVERSITY

GARVEY, WILLIAM D. DOCTORAL DISSERTATION RESEARCH IN SO-CIAL PSYCHOLOGY (SOJOSSI); 12 MONTHS \$4,060

AINSWORTH, MARY D: DOCTORAL DISSERTATION RESEARCH IN SO. CIAL PSYCHOLOGY (SOSIOIS); 12 MONTHS \$7,450

UNIVERSITY OF MARYLAND, COLLEGE PARK

OLSON, MANCUR; ROLE OF SOCIAL INDICATORS IN THE EVALUA-TION OF SOCIAL PERFORMANCE. SOME PROBLEMS OF NONMARKET ECONOMICS (SOJI 434); 9 MONTHS \$18,300

### MASSACHUSETTS

BRANDEIS UNIVERSITY

FREEMAN, HOWARD E; COLLABORATIVE RESEARCH ON UNIFORM MEASURES OF SOCIAL COMPETENCE (SOSJOIT); 24 MONTHS \$76,400

SCHNEIDER, DAVID J; DISPOSITIONAL ASPECTS OF IMPLICIT PER-SONALITY THEORY (SOJJEU); 12 MONTHS \$20,500

COUNCIL ON LAW-RELATED STUDIES

CAVERS, DAVID F; SURVEY OF LEGAL RESEARCH METHODS (S65\$475); 6 MONTHS \$1,500

HARVARD UNIVERSITY

ROSENTHAL, ROBERT, UNINTENTIONAL INFLUENCE IN DYADIC IN-

TERACTION (SOSSESSI XOI); 18 MONTHS \$50,300 MCCLELLAND, DAVID C; DOCTORAL DISSERTATION RESEARCH IN PSYCHOLOGY (SOSOSSI); 18 MONTHS \$1,150

MCCLELLAND, DAVID C; EMPIRICAL DEFINITION OF THE POWER AND AFFILIATION MOTIVATION SYNDROMES (SOJIPIA X00): 12 MONTHS \$41,800

KAGAN, JEROME; COLLABORATIVE RESEARCH ON UNIFORM MEA-SURES OF SOCIAL COMPETENCE (SOLIOUS); 24 MONTHS \$19,900

UNIVERSITY OF MASSACHUSETTS, AMHERST

BERGER, SEYMOUR M; SOCIAL LEARNING THROUGH OBSERVATION (S002746 002); 24 MONTHS \$57,600

LEVINGER, GEORGE: DEVELOPMENT AND MAINTENANCE OF PAIR RELATIONSHIPS (S033041); 27 MONTHS \$69,500

### MICKIGAN

HOPE COLLEGE

MYERS, DAVID G; DIFFERENTIAL RESPONSES TO GROUP DISCUS-SION (S008881 001); 24 MONTHS \$30,100

UNIVERSITY OF MICHIGAN

VEROFF, JOSEPH; DOCTORAL DISSERTATION RESEARCH IN SOCIAL PSYCHOLOGY (SOSILIS), 12 MONTHS \$1,400

MCKEACHIE, WILBERT J; LEADER RESPONSES TO MEMBER HOSTILITY (5041044); 18 MONTHS \$70,000

MILLER, WARREN E; ELECTORAL BEHAVIOR AND THE MEANING OF POLITICS (S033854\*); 24 MONTHS \$100,000

RIEGEL. KLAUS: DOCTORAL DISSERTATION RESEARCH IN PSYCHOLINGUISTICS (SOSIESI); 19 MONTHS \$4,700

### WAYNE STATE UNIVERSITY

KAPLAN, KALMAN J, AND FIRESTONE, IRA J, ATTITUDES, DISTANCE, ETHNICITY AND INTER-NEIGHBORHOOD CONTACT (Socies to the second MONTHS \$81,800

LEVENTHAL, GERALD 8; MODES OF RESPONSE TO INEQUITY (SOCIETION); 24 MONTHS \$77,600

#### MINNEGOTA

UNIVERSITY OF MINNESOTA

LEVY, ROBERT J; CUSTODY INVESTIGATIONS IN DIVORCE CASES (SOUTHER), 18 MONTHS \$44,800

### MISSOURI

UNIVERSITY OF MISSOURI, COLUMBIA

geen, russell g; coonitive processes in human aggression (\$000748 001); 24 MONTHS \$46,600

#### VEHIL WIN

RUTGERS UNIVERSITY

ROSENBERG, SEYMOUR, AND COHEN, BERTRAM D; VERBAL BEHAVIOR AS INTERPERSONAL COMMUNICATION (S002512 XOI); 12 MONTHS \$38,400

### **NEW YORK**

CITY COLLEGE

GOULD, LAURENCE; DOCTORAL DISSERTATION RESEARCH IN PSYCHOLOGY (SOJOCOT), 12 MONTHS \$1,560

**COLUMBIA UNIVERSITY** 

BARTON, ALLEN H: ANALYSIS OF MAJOR FACTORS IN TRIAL JURY DECISION-MAKING (S033848); 12 MONTHS 445,600

CORNELL UNIVERSITY

WEICK, KARL E; GROUP FORMATION AND DEVELOPMENT (SOSJEIN); 24 MONTHS \$58,700

GRADUATE SCHOOL AND UNIVERSITY CENTER

ALBERT, STUART: DOCTORAL DISSERTATION RESEARCH IN SOCIAL PSYCHOLOGY (SOMESS); T MONTHS \$1,900

NATIONAL BURBAU OF ECONOMIC RESEARCH

JUSTER, F THOMAS, A PILOT STUDY ON THE MEASUREMENT OF ECONOMIC AND SOCIAL PERFORMANCE (SOJJSO XOO); 18 MONTHS \$380,600

QUEENS COLLEGE

SECORD, PAUL F; THEORY AND PARADIGMS FOR NON-LABORATORY RESEARCH (SOS(439); 12 MONTHS \$9,300

SOCIAL SCIENCE RESEARCH COUNCIL

SHELDON, ELEANOR B; CENTER FOR THE COORDINATION OF RESEARCH ON SOCIAL INDICATORS (SOSPER); 18 MONTHS \$185,500

STATE UNIVERSITY AT BUFFALO

GALANTER, MARC; DEPLOYMENT PROCESS IN THE IMPLEMENTA-TION OF LEGAL POLICY (SQJ384); 24 MONTHS 476,400 LOCHNER, PHILIP R JR; THE ROLE OF THE COGNITIVE PROCESS IN

DETERMINING THE DEMAND FOR LEGAL SERVICES (SOJJEST); 18 MONTHS \$44,300

STATE UNIVERSITY AT STONY BROOK

SINGER, JEROME E; COLLABORATIVE RESEARCH ON SOCIAL PSYCHOLOGICAL REACTIONS TO STRESS (SOCIETIES): 12 MONTHS \$34,100

TEACHERS COLLEGE

DEUTSCH. MORTON; ELEMENTS OF CONFLICT RESOLUTION (SOOF#17 X02); 12 MONTHS \$45,000

BEVER, THOMAS G. DOCTORAL DISSERTATION RESEARCH IN SO. CIAL PSYCHOLOGY (SOSETTE); 12 MONTHS \$500

UNIVERSITY OF ROCHESTER

IKER, HOWARD P; THE RECOGNITION AND ANALYSIS OF CONTENT BY COMPUTER (SOJERAILE), 24 MONTHS \$71,700

## NORTH CAROLINA

DUKE UNIVERSITY

JONES, EDWARD E: PERSON PERCAPTION AND SELF-PRESENTA. TION (SOESUS XOI); 12 MONTHS \$35,700

BACK, KURT W; SOCIAL INDICATORS FOR SELF REALIZATION (S032436); 12 MONTHS \$47,500

University of North Carolina at Chapel Hill

WALKER, W L, AND THIBAUT, JOHN W; HUMAN BEHAVIOR AND THE LEGAL PROCESS (SOLUTION XOI); 12 MONTHS \$39,000

RHEINGOLD, HARRIET L: DOCTORAL DISSERTATION RESEARCH IN PSYCHOLOGY (S030090); 12 MONTHS \$700

PELS RESEARCH INSTITUTE

PARKE, ROSS D; DETERMINANTS OF SELF-CONTROL AND AGGRES-SION IN CHILDREN (S051883 X00); 18 MONTHS \$49,800

OHIO STATE UNIVERSITY

HAKEL, MILTON D; INTERPERSONAL PERCEPTION AND BEHAVIOR PREDICTION (S002355 001); 24 MONTHS \$14,800



QUIGLEY, JOHN B JR; IMPACT OF GOVERNMENT PROGRAMS ON FAMILY LIFE-THE SOVIET EXPERIMENT (SOJJEST); 24 MONTHS \$51,000

### UNIVERSITY OF CINCINNATI

LUNDGREN, DAVID C; DEVELOPMENT STAGES IN HUMAN RELA-TIONS TRAINING GROUPS (SQJ\$779); 24 MONTHS \$43,800

#### ABBAAN.

### OREGON RESEARCH INSTITUTE

BLOVIC, PAUL: DEVELOPING MODELS OF DECISION MAKING AND JUDGEMENT (SOLISS), IN MONTHS \$124,000

#### MINNSYLVANIA

### PENNSYLVANIA STATE UNIVERSITY

SMITH, JAMES D: COLLABORATIVE RESEARCH ON THE DISTRIBUTION OF INCOME AND WEALTH WITH MICROSIMULATION APPLICATIONS (SOI) 441; 6 MONTHS \$30,800

### SWARTHMORE COLLEGE

GERGEN, KRNNETH J; THE EFFECTS OF AID ON RECIPIENT AT-TITUDES (SOSIOSI XOO): 12 MONTHS \$45,400

#### UNIVERSITY CITY SCIENCE CENTER

LANDIS, DANIEL; CROSS-CULTURAL SKILLS AND INTERPERSONAL EFFECTIVENESS IN AN URBAN ENVIRONMENT (SOJO958 XOO), 18 MONTHS 854,800

### UNIVERSITY OF PENNSYLVANIA

TEGER, ALLAN 1; EXPERIMENTAL STUDIES OF THE ESCALATION OF CONFLICT (SOME 1); 24 MONTHS \$43,400

### TENNESSEE

### VANDERBILT UNIVERSITY

THOMPSON, JAMES D, AND BATES, FREDERICK L; LIFE CYCLE AND THE ENVIRONMENTAL CONTEXT (SOJJ473); 24 MONTHS \$75,800

#### TEXAS

### UNIV OF TEXAS AT AUSTIN

ARONSON, ELLIOT; ANTECEDENTS OF INTERPERSONAL ATTRACTION (SOSSESSIOO); \$1,200

WICKLUND, ROBERT A: IMPLICATIONS OF A THEORY OF SELF AWARENESS (SOITED): 24 MONTHS \$50,800

LINEBERRY, ROBERT L; SOCIOSPATIAL DISTRIBUTION OF URBAN PUBLIC POLICIES (SOSISSO), 12 MONTHS \$16,200

GLASS, DAVID C; COLLABORATIVE RESEARCH ON SOCIAL PSYCHOLOGICAL REACTIONS TO STRESS (SOJUTE); 12 MONTHS \$38,800

### VERMONT

### UNIVERSITY OF VERMONT

LEFF, HERBERT L, AND GORDON, LAWRENCE R; CREATIVE PER-CEPTION AND ENVIRONMENTAL AWARENESS (SOJI47); 12 MONTHS \$10,500

### WISCONSIN

### UNIVERSITY OF WISCONSIN, MADISON

HAGE, JERALD, AND GARGAN, EDWARD; COMPARATIVE STUDY OF

SOCIETAL STABILITY (SOJOSSA XOO); 12 MONTHS \$30,700
WALSTER, ELAINE; STUDIES TESTING A THEORY OF POSITIVE AFFECT (SOJOSSA XOO); 12 MONTHS \$66,000

LEVENTHAL, HOWARD; THE CONTROL OF EMOTIONAL AND INSTRU-MENTAL ACTS THROUGH INFORMATION AND SELF OBSERVATION (S04)450 X00); 12 MONTHS \$52,200

ALFORD, ROBERT R; THEORETICAL INVESTIGATION OF THE REQUIREMENTS FOR INDICATORS OF STRUCTURE AND CHANGE IN THE POLITICAL ECONOMY OF WESTERN SOCIETIES (SOSILISS); 12 MONTHS \$15,200

PILIAVIN, JANE A, AND PILIAVIN, IRVING M; BYSTANDER BEHAVIOR IN EMERGENCIES (SOJEJE): 24 MONTHS \$90,500

## **ENGINEERING**

## ENGINEERING CHEMISTRY

### ALABAMA

### AUBURN UNIVERSITY

ASKEW, WILLIAM C; HYDROGEN FLAME IONIZATION DETECTION OF INERTS (XOJISI); 12 MONTHS \$18,100

### ARIZONA

### ARIZONA STATE UNIVERSITY

KUESTER, JAMES L; RESEARCH INITIATION - MOLECULAR WEIGHT DISTRIBUTION CONTROL IN A CONTINUOUS STIRRED TANK POLYMERIZATION REACTOR (KOSSESO); 18 MONTHS \$16,000

#### CALIFORNIA

## CALIFORNIA INSTITUTE OF TECHNOLOGY

PINGS, C J; EFFECT OF ATOMIC INTERACTIONS ON THE STRUCTURE AND PHYSICAL PROPERTIES OF FLUIDS (KOMMM); 18 MONTHS \$75,000

#### PTANEADA INIVERSITY

BOUDART, MICHEL; HETEROGENEOUS CATALYL'S BY TRANSITION METALS (KOITISI XOI), 12 MONTHS \$99,800

WILDE, DOUGLASS J; SINGULARITY IN OPTIMIZATION (KOSILES); 12 MONTHS \$19,100

MADIX, ROBERT J; HIGH TEMPERATURE REACTIONS OF SOLIDS (KOS1873); 12 MONTHS \$40,400

#### UNIVERSITY OF CALIFORNIA, BERKELEY

OPPENHEIM, A K; STUDY OF EXOTHERMIC PROCESSES BY THE USE OF BLAST WAVES (KORRETS COI); 12 MONTHS \$52,000

VERMEULEN, THEODORE; PROCESS ANALYSIS OF COMPLEX ION-EXCHANGE AND ADSORPTION OPERATIONS (KON141); 24 MONTHS 881,400

FOSS, ALAN S; CONTROL OF FIXED-BED CHEMICAL REACTORS (KOS 1098 X00); 12 MONTHS \$39,000

PETERSEN, EUGENE E; A STUDY OF NON-UNIFORM POISONING OF HETEROGENEOUS CATALYSTS USING A SINGLE-PELLET REACTOR (KOG (#48); 12 MONTHS \$33,400

### UNIVERSITY OF CALIFORNIA, DAVIS

BELL, RICHARD L; LIQUID MIXING AND EFFICIENCY ON NON-IDEAL DISTILLATION TRAYS (KONGIO); 24 MONTHS \$83,800

SMITH, J M; PHOTOCHEMICAL REACTION ENGINEERING, POLYMERIZATION AND HERBICIDE DECOMPOSITION (KGJ4546); 12 MONTHS \$18,600

### UNIVERSITY OF CALIFORNIA, IRVINE

LENHOFF, HOWARD M; COUPLED ENZYME SYSTEMS ON INSOLUBLE MEMBRANES (KG90407); 12 MONTHS \$14,200

#### COLORADO

## COLORADO SCHOOL OF MINES

KIDNAY, ARTHUR J; SOLID-GAS PHASE EQUILIBRIA STUDIES (KO14745); 24 MONTHS \$33,600

### CONNECTICUT

### UNIVERSITY OF CONNECTICUT

DABORA, ELI K; BASIC STUDIES OF NITROGEN OXIDE EMISSION RELEVANT TO GAS TURBINE COMBUSTORS (KGJ1468); 24 MONTHS \$49,500

### DELAWARE

### UNIVERSITY OF DELAWARE

KATZER, JAMES R, AND MANOGUE, WILLIAM H; EFFECT OF CRYSTALLITE SIZE ON CATALYST SELECTIVITY (KOSIGIS X00); 12 MONTHS \$20,700

### **FLORIDA**

### UNIVERSITY OF FLORIDA

WESTERBERG, ARTHUR W: COMPUTER-AIDED DESIGN AND OP-TIMIZATION OF CHEMICAL ENGINEERING SYSTEMS (K018633 001); 18 MONTHS \$59,500

# UNIVERSITY OF FLORIDA-ENGINEERING & INDUSTRIAL EXPERIMENT STATION

GORDON, RONALD J; STUDIES ON THE EXPLANATION AND COR-RELATION OF TURBULENT DRAG REDUCTION (KGJ1590); 12 MONTHS \$20,100

### GEORGIA

### GEORGIA INSTITUTE OF TECHNOLOGY

GRENGA, HELEN E; CHEMISORPTION AND CATALYSIS- CARBON MONOXIDE ON METALS AND ALLOYS (KO26487); 24 MONTHS \$39,000

### IDAHO

### UNIVERSITY OF IDAHO

JACKSON, MELBOURNE L; DESORPTION OF SUPERSATURATED GASES FROM WATER (KOJJ973); 18 MONTHS \$16,100

EDWARDS, LOUIS L JR, AND BLAIR, LESLIE M; A FUNDAMENTAL STUDY OF COALESCENCE MIXING IN TWO PHASE SYSTEMS (KOJ4413); 12 MONTHS \$20,900

### ILLINOIS

## INTERNATIONAL CONGRESS ON CATALYSIS

HAENSEL, VLADIMIR; V INTERNATIONAL CONGRESS ON CATALYSIS (KOJ4JOS); 12 MONTHS \$5,000

### NORTHWESTERN UNIVERSITY

CARR, STEPHEN H; RESEARCH INITIATION - MICROBIAL DEGRADA-TION OF AMYLOSE-BASED FILMS (KOSSIS); 18 MONTHS \$16,000



GRAESSLEY, WILLIAM W; RHEOLOGY OF POLYMER SYSTEMS (KOJJIAR X00); 12 MONTHS \$36,600

SLATTERY, JOHN C; DEFORMING PHASE INTERFACES (KOSISSE X00); 12 MONTHS \$31,600

### UNIVERSITY OF ILLINOIS AT URBANA

SCHMITZ, ROGER A; MULTIPLE STATES AND INSTABILITIES IN CHEMICALLY REACTING SYSTEMS (Koossis 001); 24 MONTHS \$64,000 HANRATTY, THOMAS J; WALL TURBULENCE (Koossis XOS); 12 MONTHS \$44,900

ECKERT, CHARLES A; MOLECULAR THERMODYNAMICS OF KINETIC SOLVENT EFFECTS (ROLLIO 001); 6 MONTHS \$5,000

HANRATTY, T J; TWO-PHASE FLOW (ROSITS) X00); 12 MONTHS \$28,200 KOZINSKI, ALLEN A; RESEARCH INITIATION · CONTROLLED SEPARATION WITH ARTIFICIAL DYNAMIC MEMBRANES (KOSSESS); 18 MONTHS \$16,000

#### INDIANA

### PURDUE UNIVERSITY

WANKAT, PHILIP C; RESEARCH INITIATION - LIQUID-LIQUID EXTRACTION PARAMETRIC PUMPING (KOJISSI); 18 MONTHS \$16,000 LEIDENFROST, WOLFGANG; MEASUREMENT AND ANALYSIS OF FLUID PROPERTIES (KOJISS); 12 MONTHS \$49,000

#### KANSAS

### KANSAS STATE UNIVERSITY

ERICKSON, L E; TOWER SYSTEMS FOR MICROBIAL GROWTH (KGJ1891): 12 MONTHS \$18.800

#### KENTUCKY

### UNIVERSITY OF LOUISVILLE

PAVONI, JOSEPH L; RESEARCH INITIATION - ALGAL EXTRACTION UTILIZING BIOLOGICAL AND CHEMICAL FLOCCULATIVE TECHNIQUES (Ko31731): 18 MONTHS \$15.000

#### LOUISIANA

### TULANE UNIVERSITY

WEAVER, ROBERT E C, AND LAW, VICTOR J; THIRD GENERATION CONTROL OF A REACTOR-SEPARATOR COMPLEX (KOJ4048 X00); 12 MONTHS \$38400

### MAINE

### UNIVERSITY OF MAINE, ORONO

ZIEMINSKI, STEFAN A; RATE OF MASS TRANSFER OF GAS TO AQUE-OUS ELECTROLYTE SOLUTIONS (KOJOSSS); 24 MONTHS \$72,300

### MARYLAND

## UNIVERSITY OF MARYLAND, COLLEGE PARK

SILVERMAN, J. AND SMITH, T. G; RADIATION -INDUCED CHAIN REACTIONS IN HETEROGENEOUS SYSTEMS (KOJIJ66); 12 MONTHS \$39,300

### MASSACHUSETTS

### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

BRIAN, PLT, AND VIVIAN, JE; GAS ABSORPTION WITH SIMULTANE-OUS CHEMICAL REACTION (KO11959 001); 6 MONTHS \$12,500

SATTERFIELD, CHARLES N; RESTRICTED DIFFI/SION IN MOLECU-LAR SIEVES AND IN OTHER FINE PORE MATERIALS (KOJISSS XOO); 12 MONTHS 446,100

REID, ROBERT C; EXPERIMENTAL MEASUREMENTS OF THE HEAT CAPACITIES OF LIQUIDS AT HIGH TEMPERATURES (KOJ2907 X00); 12 MONTHS 221400

YIP, SIDNEY, FREQUENCY AND WAVELENGTH DEPENDENT FLUC-TUATIONS IN LIQUIDS AND GASES (KOJ1908): 24 MONTHS \$67,900

APPLETON, JOHN P. DISPERSED CARBON (SOOT) FORMATION AND OXIDATION AT COMBUSTION TEMPERATURES (KOJI9J3): 12 MONTHS \$47.400

STICKNEY, ROBERT E: HIGH-TEMPERATURE THERMOCHEMICAL PROPERTIES OF GAS-SOLID SYSTEMS (KOJ4080); 12 MONTHS \$35,000

### TUFTS UNIVERSITY

KROESSER, F WILLIAM; IONIC SOLUTE EFFECTS IN PERVAPORA-TIVE MEMBRANE SEPARATIONS (KO11273); 12 MONTHS \$26,800

### UNIVERSITY OF MASSACHUSETTS, AMHERST

PORTER, ROGER S; VISCOSITIES AND MORPHOLOGIES DEVELOPED BY SHEAR IN PARTIALLY CRYSTALLINE POLYMERS (KO22837 001); \$5,000 DOUGLAS, J M; PERIODIC OPERATION OF CHEMICAL PROCESSES (K032526 X00); 12 MONTHS \$25,100

### WORCESTER POLYTECHNIC INSTITUTE

ZWIEBEL, IMRE; COMPOSITION DEPENDENT ADSORPTION HYSTERESIS (K011403 001); 24 MONTHS \$64,800

KRISHNASWAMIENGAR, K, AND CRUSBERO, THEODORE C; POTENTIALLY HAZARDOUS ORGANIC COMPOUNDS FROM WASTEWATER CHLORINATION (KOSOSIO): 12 MONTHS \$44,200

MA, YI H; RATE OF SORPTION OF INTERACTING MULTICOMPONENT SYSTEMS IN MOLECULAR SIEVES (KOJJJSI): 24 MONTHS \$37,500

### TUFTS UNIVERSITY JACKSON COLLEGE FOR WOMEN

LENZ, ROBERT W; REACTION-INDUCED CRYSTALLIZATION OF POLYMERS (Kolder col): 6 Months 44,800

#### **MICHIGAN**

#### UNIVERSITY OF MICHIGAN

POWERS, JOHN E: ACCURATE CALORIMETRIC DATA AT ELEVATED PRESSURES (Kollis 001): 12 MONTHS \$67,900

KADLEC, ROBERT H; CONTROLLED CYCLIC OPERATION OF A FLASH VAPORIZER (KOSSISS X00), 12 MONTHS \$28,300

WEBER, WALTER J JR; PREDICTIVE METHODS FOR ADSORPTION FROM WATERS AND WASTEWATERS (KGJ5060); 12 MONTHS \$41,400

#### MINNESOTA

### UNIVERSITY OF MINNESOTA

DAHLER, JOHN S; TRANSPORT PROPERTIES OF POLYATOMIC AND CHEMICALLY REACTIVE FLUIDS (KGS1473); 12 MONTHS \$87,800
THOMPSON, DAVID R; RESEARCH INITIATION - AMINO ACID DEGRADATION DURING EXTRUSION (KGS2678); 18 MONTHS \$15,800

WILLEKE, KLAUS, RESEARCH INITIATION - SMOKE STACK SIMULA-TION BY MEANS OF A FLUIDIZED BED (KOSSES); 18 MONTHS \$15,000

TION BY MEANS OF A FLUIDIZED BED (KOSEES); 18 MONTHS \$15,000 RANZ, WILLIAM E; BASIC STUDIES OF OAS-PARTICULATE SYSTEMS (KOS411); 12 MONTHS \$36,400

### UNIVERSITY OF MINNESOTA-INSTITUTE OF TECHNOLOGY

AMUNDSON, NEAL R; ANALYSIS OF COUPLED SYSTEMS II (KO20407 X01); 14 MONTHS \$36,700

### MISSOURI

### UNIVERSITY OF MISSOURI, COLUMBIA

LEE, VIN-JANG; HETEROGENEOUS CATALYSIS- EFFECTS OF ELEC-TRODYNAMIC FIELDS ON ACTIVITY AND SELECTIVITY (KG44766); 12 MONTHS 429,900

### UNIVERSITY OF MISSOURI, ROLLA

ARMALY, BASSEM FARID; RESEARCH INITIATION - TRANSMISSION CHARACTERISTICS OF AN OIL FILM ON A WATER SUBSTRATE (KOJ2679); 18 MONTHS \$16,000

## NEW JERSEY

## PRINCETON UNIVERSITY

MARK, PETER, BOTTOMS, WILMER R, AND OLLIS, D F; ELECTRONIC PROCESSES IN HETEROGENEOUS CATALYSIS (Kalifal 001): 12 MONTHS \$36,100

SCHOWALTER, W R; FLOW OF NON-NEWTONIAN FLUIDS NEAR IN-TERFACES (KOJ (127); 24 MONTHS \$40,300

### STEVENS INSTITUTE OF TECHNOLOGY

GOGOS, COSTAS G, AND BIESENBERGER, JOSEPH A; ENGINEERING ASPECTS OF POLYMER MANUFACTURE AND PROCESSING (KGJ079); 12 MONTHS \$49.500

## NEW YORK

### AMERICAN INSTITUTE OF CHEMICAL ENGINEERS

VAN ANTWERPEN F J; CONFERENCE ON RESEARCH NEEDS OF CHEMICAL REACTION ENGINEERING (KOJ41/21); 6 MONTHS \$400

### CITY COLLEGE

SHINNAR, REUEL, AND KATZ, STANLEY; OPTIMAL CONTROL OF CHEMICAL PROCESSES WITH NON STATIONARY RANDOM INPUTS (KOJJI41 X00); 12 MONTHS \$30,700

### CLARKSON COLLEGE OF TECHNOLOGY

COONEY, DAVID O; DYNAMICS OF SORPTION IN FIXED BEDS (Korszess); 24 MONTHS \$35,900

NUNGE, RICHARD J. AND ERIAN. FADEL F; AN INVESTIGATION OF PULSATING TURBULENT FLOW (KOS4539); 12 MONTHS \$21,000

KATZ, JOSEPH L; VAPOR NUCLEATION STUDIES IN THE THERMAL DIFFUSION CLOUD CHAMBER (KG) 1911); 24 MONTHS \$69,400

### **COLUMBIA UNIVERSITY**

SOMASUNDARAN, PONISSERIL; ELECTROCHEMICAL STUDY OF SEMI-SOLUBLE MINERALS (KOJ2511): 24 MONTHS 231 700

### CORNELL UNIVERSITY

ANDERSON, JOHN L; RESEARCH INITIATION - PARTICLE-WALL IN-TERACTIONS IN TRANSPORT THROUGH POROUS MEMBRANES (KOJ2682); 18 MONTHS \$16,000

### **NEW YORK UNIVERSITY**

TREYBAL, ROBERT E; MASS TRANSFER IN CONTINUOUSLY OPERATED AGITATED VESSELS (KOSFIST X00), 12 MONTHS \$17,000



### POLYTRCHNIC INSTITUTE OF BROOKLYN

HAN, CHANG D. NONVISCOMETRIC FLOW OF VISCOELASTIC FLUIDS (KORSSES): 24 MONTHS \$36,800

LEDERMAN, SAMUEL, AND SFORZA, P M; CONCENTRATION MEA-SUREMENTS IN JETS (KOSMOJ): 12 MONTHS \$20,000

## BENSSELARR POLYTECHNIC INSTITUTE

ALTWICKER, ELMAR R; INHIBITION OF AIR OXIDATION OF SULFUR DIOXIDE DURING ALKALINE SCRUBBING (KOROSS); 12 MONTHS \$15,700

### STATE UNIVERSITY AT BUFFALO

CULLINAN, HARRY T JR; DIRECT MEASUREMENT OF THER-MODYNAMIC PROPERTIES IMPORTANT IN THE STUDY OF LIQUID DIF-FUSION (KONITER XOO); 12 MONTHS \$25.100

### SYRACUSE UNIVERSITY

STERN, S ALEXANDER: PERMEATION OF GASES AND VAPORS THROUGH POLYMERIC MEMBRANES (KOSOSIS): 24 MONTHS \$-4,400 TIEN, CHI, AND TURIAN, RAFFI M; KINETICS OF DEEP BED FILTRA-TION (KOSSSTE); 12 MONTHS \$62,600

### **NORTH CAROLINA**

## NORTH CAROLINA STATE UNIVERSITY AT RALEIGH

WORK, ROBERT W: THE ALPHA-BETA TRANSFORMATION OF SPIDER SILK POLYPEPTIDES AS RELATED TO THE FORMATION AND PROPER-TIES OF FIBERS SO PRODUCED (KONSIS); 12 MONTHS \$52,100

## CASE WESTERN RESERVE UNIVERSITY

ANGUS, JOHN C; PERTURBATION OF ORGANIC REACTION PATHS BY SELECTIVE ABSORPTION OF LASER RADIATION (KOIS407 001); 6 MONTHS \$26,100

LANDO, JEROME B; TWO-DIMENSIONAL POLYMER FILMS MADE BY POLYMERIZATION IN A MONOLAYER OR MULTILAYER (KOJOSSO); 24 MONTHS \$73,700

#### OKLAHOMA

## OKLAHOMA STATE UNIVERSITY

ROBINSON, R L; THE INTERMOLECULAR POTENTIAL FUNCTION AND PROPERTIES OF FURE SUBSTANCES AND MIXTURES (KOSSOSO); 12 MONTHS \$32,000

### UNIVERSITY OF TULSA

SYLVESTER, NICHOLAS D; RESEARCH INITIATION-MASS TRANSFER AND LIQUID DISTRIBUTION IN THREE PHASE REACTORS (KOJ4161); 18 MONTHS \$16,000

### PENNSYLVANIA

### BUCKNELL UNIVERSITY

GRESKOVICH, EUGENE J; REJUVENATION OF POLLUTED STREAM BEDS (Koseeti): 18 MONTHS \$26,700

### CARNEGIE-MELLON UNIVERSITY

CUSSLER, EDWARD L; PUMPING EFFECTS IN MEMBRANES (KOSSIS); 24 MONTHS \$51,900

BRENNER, HOWARD: TRANSPORT PROCESSES IN MULTIPARTICLE LAMINAR FLOW SYSTEMS. PART II (KOJ 1833); 24 MONTHS \$108,600

### COMBUSTION INSTITUTE

WILLIAMS, GLENN C: FOURTEENTH SYMPOSIUM (INTERNATIONAL) ON COMBUSTION (KOJ481J\*), 12 MONTHS \$5,000

### LEHIGH UNIVERSITY

LUYBEN, WILLIAM L; DYNAMICS AND CONTROL OF DISTILLATION COLUMNS WITH SIDESTREAM DRAWOFFS (KOJ4090 X00); 12 MONTHS 135,000

### PENNSYLVANIA STATE UNIVERSITY

KLAUS, E ERWIN, AND DUDA, JOHN L; FLOW RATE MEASUREMENT IN ELASTROHYDRODYNAMIC LUBRICATION (Kossoss): 12 MONTHS

### UNIVERSITY OF PENNSYLVANIA

PERLMUTTER, DANIEL D. STABILITY OF TUBULAR RECYCLE REAC-TORS WITH SIGNIFICANT AXIAL OR TRANSVERSE TRANSPORT AF. FECTS (K010864 001); & MONTHS \$6,000

MYERS, ALAN L; ADSORPTION AT THE LIQUID-SOLID INTERFACE (KO14754 001), 3 MONTHS \$7,700

QUINN, J A; STUDIES ON DIFFUSION, FLOW, AND TRANSPORT THROUGH MODEL MEMBRANES (KOJ2247): 24 MONTHS \$86,500

### CARNEGIE-MELLON UNIVERSITY-CARNEGIE INSTITUTE OF TECHNOLOGY

DENT, ANTHONY L; RESEARCH INITIATION - INFRARED STUDIES IN A FLUIDIZED BED (KOJEES); 18 MONTHS \$16,000

### RHODE ISLAND

### BROWN UNIVERSITY

KESTIN, JOSEPH; TRANSPORT PROPERTIES OF GASES (KOOLISE XOS); 12 MONTHS 463,600

MASON, EDWARD A: TRANSPORT THEORY FOR AEROSOLS AND FOR MEMBRANES (KOSOSEI); 12 MONTHS \$19,800

## UNIVERSITY OF RHODE ISLAND

KNICKLE, HAROLD N: MULTISOLVENT EXTRACTION OF FISH PROTEIN (KOSISSI): 24 MONTHS \$36.450

### SOUTH CAROUNA

### CLEMSON UNIVERSITY

BARLAGE, WILLIAM B; THE EFFECT OF IONIC CONDITIONS ON GAS ABSORPTION IN VARIOUS SOLUTIONS OF SURFACE-ACTIVE AGENTS (KG24554 X00): 12 MONTHS \$16,700

#### TENNESSEE

## University of tennessee. Knoxville

JURY, STANLEY H; THERMAL AND ORDINARY DIFFUSIVITY OF CER-TAIN ADSORBENT SOLIDS (KOJIO78); 24 MONTHS \$61,700

#### THYAS

### RICE UNIVERSITY

KOBAYASHI, RIKI; EXPERIMENTAL AND THEORETICAL STUDIES OF THERMODYNAMIC AND TRANSPORT PROPERTIES (KOJILLE KOO); 12 MONTHS \$82,100

### UNIV OF TEXAS AT AUSTIN

HIMMELBLAU, DAVID M; STOCHASTIC EFFECTS IN THE PROCESS MODELING OF BIOLOGICAL WASTE TREATMENT (KOSLUS), 24 MONTHS \$31,500

### UNIVERSITY OF HOUSTON

DUKLER, ABRAHAM E: MASS TRANSFER OF THE DISPERSED PHASE IN TWO-PHASE FLOW (ROSISS X00); 12 MONTHS \$40,100

HENLEY, ERNEST J; CONFERENCE ON RESEARCH NEEDS AND PRI-ORITIES IN PROCESS DESIGN AND SIMULATION (KOSELIE); & MONTHS **\$2.600** 

HENLEY, ERNEST J; ANALYSIS AND DESIGN OF PROCESS RELIA-BILITY (Kasisie); 12 MONTHS \$19,000

FLUMERFELT, RW; EXTENSIONAL FLOW PHENOMENA IN POLYMER SOLUTIONS AND MELTS (KOSIFIE); 24 MONTHS \$54,500

## UNIVERSITY OF VIRGINIA

GAINER, JOHN L; DIFFUSION IN MIXED POLYMER SOLUTIONS (Kasissin: 12 Months \$31,600

KIRWAN, DONALD J; NON-EQUILIBRIUM IMPURITY DISTRIBUTION DURING CRYSTALLIZATION FROM THE MELT (KOLITSI); 12 MONTHS \$18,900

## VIRGINIA POLYTECHNIC INSTITUTE

MCGEE, HENRY A JR; INORGANIC POLYMERS FROM AMINOBORANE (KO\$4541); 12 MONTHS \$20,700

### WASHINGTON

## UNIVERSITY OF WASHINGTON

MOULTON, RALPH W; CRITICAL FLOW FOR STRAM-WATER MIX-TURES (KG03848 001); 24 MONTHS \$44,200

FINLAYSON, BRUCE A: FUNDAMENTAL RESEARCH IN FLUID MECHANICS (KOI2517 001); 24 MONTHS \$63,800

BECK, THEODORE R: MEASUREMENT AND INTERPRETATION OF SURFACE STRESS OF SOLID METAL ELECTRODES (KONSOSI): 12 MONTHS \$23,400

HEIDEGER, WILLIAM J. DISPERSED PHASE MASS TRANSFER (KOJI 43 X00); 12 MONTHS \$30,700

### WEST VIRGINIA

## ARCADIA INSTITUTE FOR SCIENTIFIC RESEARCH INC

DOOLITTLE, ARTHUR X; VOLUME-ENTROPY-ENERGY EQUATION OF STATE FOR LIQUIDS (KOJIS40); 12 MONTHS \$15,000

### WISCONSIN

### MARQUETTE UNIVERSITY

CARTER, JOHN L; RESEARCH INITIATION - CHEMICAL-BIOLOGICAL TREATMENT PLANT FOR OPTIMUM PHOSPHORUS AND BOD REMOVAL (K0/2875): 18 MONTHS \$18,000

### UNIVERSITY OF WISCONSIN, MADISON

BIRD, R BYRON; MACROMOLECULAR HYDRODYNAMICS (K024749); 24 MONTHS \$118,200

LIGHTFOOT, E N; BIOLOGICALLY ORIENTED MASS TRANSFER STU-DIES (KOJJJ46 X00); 12 MONTHS \$27,700



## ENGINEERING ENERGETICS

#### ALABAMA

#### TUSKEGER INSTITUTE

DILLON, IRA G; DENSITIES OF ALKALI METALS BY A GAMMA RADIA. TION ATTENUATION TECHNIQUE (KOMMAN); 12 MONTHS \$48,700

#### ARIZONA

### ARIZONA STATE UNIVERSITY

EVANS, DONOVAN L: ARC HEATED PLASMA (KOOSSSS 001): \$320

### UNIVERSITY OF ARIZONA

FARR, W MORRIS; MICROINSTABILITIES IN INHOMOGENEOUS PLASMA (K083430); 18 MONTHS \$20,000

#### CALIFORNIA

### CALIFORNIA INSTITUTE OF TECHNOLOGY

SABERSKY, R H; HEAT TRANSFER TO GRANULAR MEDIA (KOJOSEI); 12 WONTHS BIG 700

#### TANFORD UNIVERSITY

KINO, GORDON S; STUDIES OF ACOUSTIC WAVE PHENOMENA (Koriess), 24 MONTHS \$83,900

PANTELL, RICHARD H. AND PUTHOFF, HAROLD E; A METHOD FOR OBTAINING HIGH-POWER BROADLY-TUNABLE LASER ACTION IN THE ULTRAVIOLET PART OF THE SPECTRUM (KOSI907); 24 MONTHS \$68,900

SIEGNAN, A E; ULTRA-SHORT LIGHT PULSE GENERATION AND OPTI-CAL PARAMETRIC OSCILLATOR MODE-LOCKING (KOSESTI X00); 12 MONTHS \$58,800

BUNEMAN, OSCAR; STABLE ONE-DIMENSIONALLY CONFINED PLASMA CONFIGURATIONS (KOJESIS); 12 MONTHS \$33,400

CRAWFORD, F W; NONLINEAR WAVE INTERACTION EFFECTS IN PLASMAS (KOSETES X00); 12 MONTHS \$56,900

#### STD RESEARCH CORPORATION

DEMETRIADES, S T, AND ABGYROPOULOS, Q S; NUMERICAL SOLU-TIONS OF THE COUPLED THREE-DIMENSIONAL MAGNETOHYDRODYNAMIC CHANNEL PROBLEM (C127000); 12 MONTHS \$74,903

### UNIVERSITY OF CALIFORNIA, BERKELEY

TIEN, CHANG L; HEAT TRANSFER THROUGH CRYOGENIC MUL-TILAYER INSULATIONS (KOJOSST); 24 MONTHS \$47,500

## UNIVERSITY OF CALIFORNIA, IRVINE

GAMO, HIDEYA; STATISTICAL ANALYSIS OF LASER RADIATION BY INTENSITY CORRELATION EXPERIMENTS (KOJISSO); 24 MONTHS \$63,700

### UNIVERSITY OF CALIFORNIA, LOS ANGELES

WAZZAN, A R; SPATIAL STABILITY AND TRANSITION OF INCOM-PRESSIBLE LAMINAR BOUNDARY LAYERS WITH HEAT TRANSFER (K023090): 12 MONTHS \$21,700

KNUTH, ELDON L; RESEARCH IN MOLECULE-SURFACE COLLISIONS WITH TRANSLATIONAL ENERGIES UP TO TWENTY ELECTRON VOLTS (KOJOSO6); 24 MONTHS 168,900

CASPERSON, LEE W; RESEARCH INITIATION - FREQUENCY STABILI-TY AND OUTPUT POWER OF HIGH GAIN LASERS (KOIZEAT); 18 MONTHS

JASSBY, DANIEL L; RESEARCH INITIATION - ABSORPTION OF LASER ENERGY IN DENSE PLASMAS (KOSZEZS); 18 MONTHS \$16,000

### UNIVERSITY OF CALIFORNIA, SAN DIEGO

MILLER, DAVID R; APPLICATION OF FREE JET SOURCES TO REACTIVE CROSSED MOLECULAR BEAM EXPERIMENTS (KOJSPS), 12 MONTHS \$25,000

## COLORADO

### COLORADO SCHOOL OF MINES

DICKSON, PHILIP F; COLD WEATHER PAVING (ROSSES); 24 MONTHS \$48,100

STERMOLE, F J. AND GOLDEN, JOHN O; PHASE CHANGE THERMAL CONTROL TECHNOLOGY (KOJUSI); 12 MONTHS \$19,600

## COLORADO STATE UNIVERSITY

CHAN, P W; EXPERIMENTAL INVESTIGATIONS AT THE PLASMA-SOLID INTERFACE USING LIGHT SCATTERING TECHNIQUES (KOSTITS); 12 MONTHS \$25,700

### CONNECTICUT

### YALE UNIVERSITY

FENN, JOHN B, AND ANDERSON, JAMES B; STUDIES OF MOLECULAR COLLISION PROCESSES (ROSSESS 001); 12 MONTHS 417,200

CHANG, RICHARD K; DISPERSION OF THE OPTICAL NONLINEAR SUSCEPTIBILITY OVER A WIDE WAVELENGTH RANGE (KOJIPO); 24 MONTHS \$32,800

BURROW, PAUL D; THE STUDY OF VIBRATIONALLY EXCITED MOLECULES BY SUPERELASTIC ELECTRON SCATTERING (KOJSOOI); 24

### rensselaer polytechnic institute rensselaer polytechnic INSTITUTE OF CONN

HODGES, JAMES L: RESEARCH INITIATION THE EFFECT OF EX. HAUST GAS RECIRCULATION ON SPARK IGNITION ENGINE KNOCK (Kassero); 18 NONTHS \$16 NO

#### DISTRICT OF COLUMBIA

### CATHOLIC UNIVERSITY OF AMERICA

DEUTSCH, ROBERT W. AND BACHARACH, STEPHEN L. EXPERIMEN. TAL AND THEORETICAL INVESTIGATION OF NUCLEAR FISSION IN-DUCED BY LOW-ENERGY PARTICLES (KOMUST): 12 MONTHS \$34,000

### GEORGIA INSTITUTE OF TECHNOLOGY

ZUBER, NOVAK, AND ISHII, MAMORU; THERMALLY INDUCED FLOW OSCILLATIONS IN TWO PHASE SYSTEMS IN THERMAL EQUILIBRIUM (K016021 001); 12 HONTES \$46,900

#### HAWAII

### UNIVERSITY OF HAWAII

FAND, RICHARD M; SIMULTANEOUS BOILING AND CONVECTION HEAT TRANSFER FROM BODIES WITH BOUNDARY LAYER SEPARA. TION (KO14546 001); 9 MONTHS \$9,000

#### ILLINOIS

### UNIVERSITY OF ILLINOIS AT CHICAGO CIRCLE

CUTTING, JOHN C: RESEARCH INITIATION-AXIAL CURRENT LEAKAGE IN COMBUSTION DRIVEN SEGMENTED MHD GENERATORS (Kos2656): 18 MONTHS \$16,000

### UNIVERSITY OF ILLINOIS AT URBANA

COLEMAN, PAUL D; CO AND TRIATOMIC CHEMICAL LASER SYSTEMS (Koo431 001); 24 MONTHS \$64,000

CHILTON, ARTHUR B, AND AXFORD, ROY A; APPLICATION OF PARALLED ARRAY COMPUTERS TO RADIATION TRANSPORT CALCU-LATIONS (KO21040 001); 12 MONTHS \$22,800

GOLDSTEIN, L. AND MERKELO, H; NEAR-RESONANT QUANTUM IN-TERACTIONS OF COHERENT LASER RADIATION WITH GASEOUS PLASMA CONSTITUENTS (KOR7759 001); 12 MONTHS \$39,900

MILEY, GEORGE H, AND JONES, BARCLAY G; EXPERIMENTAL STU-DIES OF COUPLED NUCLEAR REACTORS (KOJ774): 12 MONTHS \$34,400

## INDIANA

## PURDUE UNIVERSITY

TAYLOR, R E; EVALUATION OF THE FLASH DIFFUSIVITY METHOD FOR HIGH TEMPERATURE MEASUREMENTS (KONJAN); 24 MONTHS

VISKANTA, RAYMOND; THERMAL REMOTE SENSING OF SEMITRANS. PARENT CONDENSED PHASES (KOJEJIJ X00): 12 MONTHS \$30,800

## UNIVERSITY OF NOTRE DAME

LLOYD, JOHN R; RESEARCH INITIATION-LAMINAR, TRANSITION, AND TURBULENT NATURAL CONVECTION ADJACENT TO DOWNWARD. FACING INCLINED SURFACES (KOJESS); 18 MONTHS \$16,000

MORRIS, EDGAR E; RESEARCH INITIATION-NEUTRON PENETRA. TION IN SODIUM (KOSSETS): 18 MONTHS \$19,500

### UNIVERSITY OF KENTUCKY

REUCROFT, P J; CHARACTERIZATION OF FACTORS INFLUENCING ENERGY STORAGE, CONVERSION AND DETECTION PROCESSES IN OR. GANIC SOLIDS (Ko46/54); 12 MONTHS \$23,300 CREMERS, CLIFFORD J; STUDY OF ENERGY TRANSFER IN ELEC.

TRIC ARC SYSTEMS (KOJI 434); 24 MONTHS \$66,300

EICHHORN, ROGER, AND LIENHARD, JOHN H; HEAT REMOVAL MECHANISMS AND THE NATURE OF PLUMES IN STRATIFIED FLUIDS (Kosessa): 12 MONTHS \$36,500

### MASSACHUSETTS

### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SMULLIN, LOUIS D, LIDSKY, LAWRENCE M, AND BERS, ABRAHAM; PLASMA DYNAMICS (KO28282 XOI); 12 MONTHS \$312,000

MIKIC, BORIVOJE; STUDY OF EFFECTS OF PRESENCE OF NON-CON-DENSABLE GASES ON HEAT TRANSFER COEFFICIENT IN DROPWISE CONDENSATION (KOSSIJE); 24 MONTHS \$50,700

HARLEMAN, DONALD R F; ENGINEERING ASPECTS OF HEAT DISPOSAL (Kojeste), 12 MONTHS \$33,000

GEORGE, E VICTOR, AND HOFF, PAUL W; ANOMALOUS HEATING OF PLASMAS BY INTERS CON LASER IRRADIATION (KOSSESS): 12 MONTHS

## NORTHEASTERN UNIVERSITY

BOWMAN, H FREDERICK; TRANSIENT BOILING PHENOMENA AND ITS RELATIONSHIP TO HEATER SURFACE PROPERTIES IN POOL-BOIL-ING CRYOGENIC LIQUIDS (KORIEII); 24 MONTHS \$44,900



### UNIVERSITY OF MASSACHUSETTS, AMERICA

TANG, TING-WEI; STUDY OF NONLINEAR ELECTROMAGNETIC WAVE INTERACTIONS IN AN INHOMOGENEOUS MAGNETOFLASMA (KOISSIL 001); 6 MONTHS \$5,000

HORVAY, GABRIEL, AND ZINSMEISTER, GEORGE E; TRANSIENT HEAT CONDUCTION IN COMPOSITES (ROSSELS); 12 MONTHS \$29,200

BROWN, FIELDING; FAR-INFRARED LASERS (KOJJSE); 12 MONTHS \$48,900

#### MICHIGAN

### UNIVERSITY OF MICHIGAN

KING, JOHN 8: NEUTRON INELASTIC SCATTERING IN SOLIDS (Koleus 60)); \$4 Months \$55,800 Hammitt, Frederick G; Bubble Nucleation, Growth and Col

LAPSE PHENOMENA (KOISOS) 001); 24 MONTHS \$60,100
GETTY, W D, AND ROWE, J E; INVESTIGATIONS OF PLASMA HEATING VIA BEAM-PLASMA INTERACTIONS (KOISESS 001); 12 MONTHS \$50,400

DUDERSTADT, JAMES J, OSBORN, RICHARD K, AND AKCASU, A 2; THEORETICAL STUDIES OF RADIATION SCATTERING FROM DENSE, MANY PARTICLE SYSTEMS (KOIMO XOI); 12 MONTHS \$29,700

SPRINGER, GEORGE S: INTERFACIAL PHENOMENA DURING LIQUID METAL-VAPOR PHASE CHANGE (KOSSIST); 12 MONTHS \$32,200

YANG, WENJEI, AND CLARK, JOHN A: AN UNCONVENTIONAL LIQUID SPRAY HEAT EXCHANGER FOR RANKINE CYCLE POWER PLANT APPLICATION (KOSSSIA); 12 MONTHS \$34,000

### MINNESOTA

### UNIVERSITY OF MINNESOTA

OSKAM, H J; STUDIES OF COLLISION PROCESSES IN CASEOUS DISCHARGE PLASMAS (KOIOJES 000); 84 MONTHS \$69,100

CHAMPLIN, KEITH S; INTERACTIONS BETWEEN ULTRAMICROWAYE RADIATION AND THE SEMICONDUCTOR FREE-CARRIER PLASMA (Koliese 001); 24 MONTHS \$67,500

GOLDSTEIN, R J; HEAT TRANSPORT BY THERMAL CONVECTION (Koisese ont); 24 MONTHS \$77,900

#### MISSISSIPPI

### MISSISSIPPI STATE UNIVERSITY

MURPHREE, DAVID L; ARC DISCHARGE AND ELECTRODE SPOT BEHAVIOR IN AN APPLIED MAGNETIC FIELD (KOJOSIJ); 24 MONTHS \$71,600

### MISSOURI

### UNIVERSITY OF MISSOURI, COLUMBIA

WARDER, RICHARD; INVESTIGATION OF THE ELECTRON ENERGY EXCHANGE PROCESSES IN NONEQUILIBRIUM PLASMAS (KOTA150); 24 MONTHS 171 800

### MONTANA

### MONTANA STATE UNIVERSITY

SCANLAN, J A; NATURAL CONVECTION HEAT TRANSFER FROM A HEATED BODY TO ITS FINITE ENCLOSURE (KOJIBON): 24 MONTHS \$91,100

### **COLUMBIA UNIVERSITY**

MARSHALL, T C, GROSS, R A, SCHLESINGER, S P, AND SEN, A K; PLASMA WAYES, STABILITY, AND DISSIPATION (Kozesze COI): 12 MONTHS \$101,800

## CORNELL UNIVERSITY

NATION, JOHN A: NEW HIGH-POWER PULSED MICROWAVE GENERA-TOR (K031974); 24 MONTHS \$75,100

### NEW YORK UNIVERSITY

CHEN, MICHAEL M; THERMAL CONVECTION OF HORIZONTAL FLUID LAYERS AT HIGH RAYLEIGH NUMBERS (KO23862); 24 MONTHS \$58,200

### RENSSELARR POLYTECHNIC INSTITUTE

WAYNER, PETER C JR; HEAT AND HASS TRANSFER IN EVAPORAT-ING MENISCI (Kozisti); 24 MONTHS \$61,000

TURINSKY, PAUL J; RESEARCH INITIATION - STUDY OF THE MULTI-TERM SEPARABLE KERNEL METHOD IN NEUTRON SLOWING DOWN THEORY (Kossess); 18 MONTHS \$16,000

### STATE UNIVERSITY AT BUFFALO

GILL, WILLIAM N; MIXING PROPERTIES OF MATERIAL AND THER-MAL POLLUTION SOURCES (KOJIJ80): 24 MONTHS \$40,000

### **NORTH CAROUNA**

### NORTH CAROLINA STATE UNIVERSITY AT RALEIGH

ZUMWALT, LLOYD R: THE DIFFUSION OF FISSION PRODUCTS IN ALPHA THORIUM (Kozsais); 12 MONTHS \$30,900

SAXE, R F, AND EDWARDS, J A; THE DYNAMICS OF BOILING (Kossoss); 12 MONTHS \$28,100

### OHIO

### CASE WESTERN RESERVE UNIVERSITY

PAO. YOH-HAN; LASER WAVELENGTH AND FREQUENCY STANDARDS BASED ON HE-NE LASERS AND 18188 VAPOR (KORSIES); 24 MONTHS

MAWARDI, OSMAN K: SHOCK WAVES AND THE INTERACTION OF A PLASMA BEAM WITH A MAGNETIC BARRIER (KONSOI 001); 12 MONTHS \$57,600

ORUBER, B, STUDY OF GAS TURBULENCE USING OPTICAL PROBES (Kosssie X00); 18 MONTHS \$28,100

TIEN, JAMES B; RESEARCH INITIATION . COMBUSTION IN THE

ROTATING BOUNDARY LAYER (ROSSISS), 18 MONTHS \$16,000 OSTRACH, SIMON; EFFECT OF SWIRL ON TWO-PHASE FLOWS (KO\$41\$4): 12 MONTHS \$25,500

### OREGON

### OREGON STATE UNIVERSITY

KNUDSEN, JAMES G. NATURAL AND FORCED TURBULENT WIXING BETWEEN INTERCONNECTED ADJACENT FLOW CHANNELS (KOJOJO X00); 18 MONTHS \$20,700

### PENNSYLVANIA

#### UNIVERSITY OF PENNSYLVANIA

COHEN, IRA M; RESEARCH IN IONIZED CASES. PROBES AND DISCHARGES (KOOSES) OOI); 24 MONTHS \$70,000

#### RROWN INIVERSITY

CLARKE, JOSEPH H; NONEQUILIBRIUM PHENOMENA IN STRONG IONIZING SHOCK WAVES (KOJISIO); 12 MONTHS \$36,500

### TENNESSEE

### VANDERBILT UNIVERSITY

OVERHOLSER, KNOWLES A; RESEARCH INITIATION-MEASUREMENT OF MINIMUM IGNITION ENERGIES USING A PULSED LASER (KOSEEST); 18 MONTHS \$16,000

### **TEXAS**

### SOUTHERN METHODIST UNIVERSITY

HOLMAN, JACK P; EXPERIMENTAL AND ANALYTICAL STUDIES OF JET BOILING COOLING TECHNIQUES (KONIGIT); 24 MONTHS \$32,900

### TRXAS A & M UNIVERSITY

DAVIDSON, JAMES N; RESEARCH INITIATION . PLASMA DIFFUSION IN ASYMMETRIC TOROIDAL GEOMETRIES AND ITS EFFECT ON BLAN-KET DESIGN (KO32629); 18 MONTHS \$15,900

### TEXAS TECH UNIVERSITY

KRISTIANSEN, M; THEORETICAL AND EXPERIMENTAL INVESTIGA-TIONS OF RF PLASMA HEATING (KO11657 001): 24 MONTHS \$39,500

### UNIV OF TEXAS AT AUSTIN

GAGE, STEPHEN J, AND ATKINSON, GARDNER D JR: NONDESTRUC-TIVE ASSAY OF SPECIAL NUCLEAR MATERIALS BY FISSION GAMMA ANALYSIS USING A CALIFORNIUM-452 NEUTRON SOURCE RAY (K026062); 24 MONTHS \$49,400

## VIRGINIA

### UNIVERSITY OF VIRGINIA

FISHER, SAMUEL S; GAS-SURFACE INTERACTION EXPERIMENTAL RESEARCH (K010010); 12 MONTHS \$27,200

### WASHINGTON

## UNIVERSITY OF WASHINGTON

SLEICHER, CHARLES A; DYNAMIC RESPONSE OF HOT FILM ANEMOMETERS IN LIQUID METALS (KOJO296); 24 MONTHS \$64,800

WOODRUFF, GENE L; DELAYED NEUTRON SPECTRA FROM FAST FISSION (KOJJ286): 12 MONTHS \$42,400

DEPEW, CREIGHTON A; COMBINED FREE AND FORCED CONVEC-TION IN A HORIZONTAL CIRCULAR TUBE (KOSJOJI); 12 MONTHS \$31,500

### UNIVERSITY OF WISCONSIN, MADISON

SCHARER, JE; CYCLOTRON WAVE WARM PLASMA STUDIES (KORISET): 24 MONTHS \$53,000

POWELL, HUGH N; THERMAL CONDUCTIVITY MEASUREMENT IN HIGH TEMPERATURE GASES (KO25779); 24 MONTHS \$63,600

SHOHET, J L: MICROWAVE HEATING OF PLASMAS (KOJSIJI); 24 MONTHS \$68,300

## UNIVERSITY OF WISCONSIN, MILWAUKEE

KARADI, GABOR, AND GARVEY, WALTER A; PUMPED STORAGE DEVELOPMENT AND ITS ENVIRONMENTAL EFFECTS (KOJ1688); 24 MONTHS \$21,700



### ENGINEERING MECHANICS

### ARIZONA

### UNIVERSITY OF ARIZONA

KISIEL, CHESTER C; SPACE-TIME SAMPLING AND RANDOMNESS IN RELATION TO EQUATIONS OF HYDROLOGIC SYSTEMS (KOSIO14); 12 MONTHS \$18,500

### CALIFORNIA

### CALIFORNIA INSTITUTE OF TECHNOLOGY

WU, THEODORE Y, AND PLESSET, MILTON S; BIOPHYSICAL FLUID MECHANICS (KOJ1141 X00); 13 MONTHS \$78,600

VANONI, VITO A, BROOKS, NORMAN H, AND RAICHLEN, FREDRIC: BASIC RESEARCH IN SEDIMENTATION (KOSISOZ XOO); 12 MONTHS \$61.500 HUDSON, DONALD E: RECORDING AND ANALYSIS OF DYNAMIC FULL-SCALE EARTH, BUILDING, AND DAM MOTIONS IN YUGOSLAVIA (KOJ1941): 12 MONTHS \$19,700

#### CALIFORNIA STATE UNIVERSITY, LONG BEACH

CEBECI, TUNCER, DYER, J. AND KYLE, C. R. PREDICTION OF MEAN AND FLUCTUATING FLOW VARIABLES IN TURBULENT BOUNDARY LAYERS (KOJO981): 24 MONTHS \$41,789

### CALIFORNIA STATE UNIVERSITY, NORTHRIDGE

SANDERS, CHARLES F: 1972 HEAT TRANSFER AND FLUID MECHANICS INSTITUTE MEETING (KOJ4147); 12 MONTHS \$1,500

### CALIFORNIA STATE UNIVERSITY, SAN DIEGO

KAY, I NEIL; RESEARCH INITIATION - INTERLOCK TENSION IN CEL-LULAR SHEET PILE TYPE STRUCTURES (KOJ2634); 18 MONTHS \$16,000

ACRIVOS, ANDREAS; TRANSPORT PHENOMENA WITHIN REGIONS OF CLOSED STREAMLINE FLOWS (KO21452 XO1); 12 MONTHS \$39,200

REMSON, IRWIN: HYDROLOGIC MODELS FOR PREDICTING THE EF-FECTS OF URBANIZATION (KOZ615J XOI); 12 MONTHS \$21,800

VINCENTI, WALTER G; EXPERIMENTAL DETERMINATION OF MOLECULAR NONEQUILIBRIUM PARAMETERS (KOJO635); 22 MONTHS \$73,300

HSU, E Y, AND STREET, R L; STUDIES OF SEA-AIR INTERACTIONS (KOS1808 X00); 12 MONTHS \$61,300

HAYES, WILSON C; RESEARCH INITIATION - STRESS-REMODELING RELATIONSHIPS IN BONE (KOJZEJE); 18 MONTHS \$16,000

CEDRIC w. RICHARDS. HELMUTH, AND RICHARD MICROMECHANICS OF EXPANSIVE REACTIONS IN CONCRETE (KOS4011 X00); 12 MONTHS \$59,800

KARAMCHETI. K; EIGHTH INTERNATIONAL SYMPOSIUM ON RARE-FIED GASDYNAMICS (KOSALIG); 12 MONTHS \$2,700

## UNIVERSITY OF CALIFORNIA, BERKELEY

POLIVKA, MILOS; MECHANISM OF CREEP OF CONCRETE UNDER THE EFFECTS OF CYCLIC CHANGES IN TEMPERATURE AND HUMIDI-TY (K00J901 001); 24 MONTHS \$42,500

HURLBUT, F C, AND TALBOT, L; MOLECULAR DISTRIBUTION FUNC-TIONS IN RAREFIED GAS FLOW (K011651 001); 24 MONTHS \$131,900

LUBLINER, JACOB, AND MCNIVEN. H D. FINITE DEFORMATION WAVES IN ARTERIES (A01469) X01); 12 MONTHS \$34,700

MITCHELL, JAMES K: COLLABORATIVE RESEARCH ON SOIL-CEMENT SLOPE PROTECTION FOR EARTH EMBANKMENTS (K025975); 24 MONTHS \$19,100

SCORDELIS, ALEXANDER C; STRESS ANALYSIS OF CRACKED REIN-FORCED CONCRETE MEMBERS AND SYSTEMS (KO28073 XOI); 12

MONTHS \$25,300 HSU, CHIEH S; DYNAMIC STABILITY OF RETARDED ELASTIC AND

BOUWKAMP, J G, AND WILSON, E L; STRUCTURAL ANALYSIS OF HIGH-RISE BUILDINGS CONSTRUCTED BY INDUSTRIALIZED METHODS (KOJ1586 X00); 12 MONTHS \$57,600

AEROELASTIC SYSTEMS (A331025); 24 MONTHS \$56,200

GREIF, RALPH; GAS FLOWS AT HIGH TEMPERATURES (KOJ1773); 24 MONTHS \$36,000

MIKA, THOMAS S; RESEARCH INITIATION - MODELING BATCH: SIZE REDUCTION PROCESSES (KOJ2635); 18 MONTHS \$16,000

### UNIVERSITY OF CALIFORNIA, DAVIS

SHEN. CHIH-KANG; COLLABORATIVE RESEARCH ON SOIL-CEMENT SLOPE PROTECTION FOR EARTH EMBANKMENTS (K025972); 24 MONTHS \$25,700

### UNIVERSITY OF CALIFORNIA. LOS ANGELES

MAL, A K, AND KNOPOFF, LEON; ELASTIC WAVES IN COMPOSITES (K018775), 24 MONTHS \$47,300

MUKI, R, AND WESTMANN, R A; MECHANICS OF ADHESIVE JOINTS (K030773); 24 MONTHS \$62,000

DUBOWSKY, STEVEN; RESEARCH INITIATION - DYNAMICS OF HIGH SPEED NONLINEAR MECHANISMS (KOJ26J3); 18 MONTHS \$20,000

### UNIVERSITY OF CALIFORNIA, SAN DIEGO

FUNG, Y C; CARDIO-PULMONARY DYNAMICS (KOJ2972 X00); 12 MONTHS \$72,600

VAN ATTA, CHARLES W. SPECTRAL TRANSFER IN HIGH REYNOLDS NUMBER TURBULENT FLOWS (KOSS1999); 12 MONTHS \$46,000

WOO, SAVIO L-Y, AND AKESON, WAYNE H; ARTICULAR CARTILAGE OF THE HUMAN FEMORAL HEAD (KOJ4013); 12 MONTHS \$23,800

HEGEMIER, G A; WAVE PROPAGATION IN NONHOMOGENEOUS ELASTIC AND ANELASTIC MEDIA (KOJ4017); 12 MONTHS \$64,800

#### UNIVERSITY OF SOUTHERN CALIFORNIA

WEINGARTEN, VICTOR I: EFFECTS OF NONLINEARITIES ON THE DYNAMIC RESPONSE OF SHELLS (Korsisa XoI); 12 MONTHS \$17,500 MUNTZ. E P; COLLABORATIVE EXPERIMENTAL STUDY OF A NEW GASEOUS SEPARATION PROCESS (KOJOSSI); 24 MONTHS \$60,200

MARGOLIAS, DAVID S. RESEARCH INITIATION - BUCKLING OF HYPERBOLOIDAL COOLING TOWERS (KOS2623); 18 MONTHS \$16,000

## UNIVERSITY OF CALIFORNIA, SAN DIEGO-REVELLE COLLEGE

REISSNER, ERIC: SPECIAL PROBLEMS OF ELASTIC BEAMS, PLATES. AND SHELLS (KOJOJEP), 24 MONTHS \$35,500

### COLORADO

### COLORADO STATE UNIVERSITY

BODIG, JOZSEF, AND GOODMAN, JAMES R; STRESS-STRAIN CURVES OF WOOD IN COMPRESSION (KO15785 001); 12 MONTHS \$10,400

MERONEY, ROBERT N: LAMINARITURBULENT TRANSITION IN TRANSPIRED BOUNDARY LAYER FLOWS (KORIOSO); 24 MONTHS \$41,000 NICKERSON, EVERETT C; AN EXTREMAL STUDY OF STRATIFIED SHEAR FLOWS (Kojosse); 24 MONTHS \$37,800

VANDERBILT, M D, GOODMAN, J R, CRISWELL, M E, AND BODIG, J; A RATIONAL ANALYSIS AND DESIGN PROCEDURE FOR WOOD JOIST FLOOR SYSTEMS (KOJOSSJ); 24 MONTHS \$208,700

YEVJEVICH, V: STOCHASTIC PROCESSES IN WATER RESOURCES (K031512 X00); 12 MONTHS \$85,400

YEVJEVICH, VUJICA: INVESTIGATION OF WATER RESOURCES IN KARST REGIONS (KOJ1529 X00); 12 MONTHS \$33,800

VANDER WERFF, TERRY J; RESEARCH INITIATION - EFFECTS OF LOCALIZED ABNORMALITIES ON BLOOD FLOW IN ARTERIES (KOSTEAT); 18 MONTH S \$20,000

LONGENBAUGH, R A; SECOND FORT COLLINS INTERNATIONAL SYM-POSIUM IN HYDROLOGY ON FLOODS, DROUGHTS, AND DECISION MAK-ING WITH SCARCE DATA (KOJJJ75); 12 MONTHS \$33,300 MERONEY, ROBERT N: NUMERICAL AND PHYSICAL MODELS OF

URBAN HEAT ISLAND (KOJJ800): 9 MONTHS \$17,900

BALDWIN, KIONEL V; AN EXPERIMENTAL AND SIMULATION STUDY OF TURBULENT SHEAR FLOW (KOJ4121); 4 MONTHS \$10,000

### UNIVERSITY OF COLORADO

SNYDER, HOWARD, GEOPHYSICAL MODELING EXPERIMENTS AND NONLINEAR INSTABILITY (K025290); 24 MONTHS \$39,600

SCHIFFMAN, ROBERT L; SPECIAL CONFERENCE ON COMPUTER SOFTWARE FOR CIVIL ENGINEERING (KOJOJJJ); 12 MONTHS \$13,500 KREITH, FRANK; LABORATORY MODELING OF THE LOWER AT-

MOSPHERE (Ko30584); 24 MONTHS \$33,500

SCHIFFMAN, ROBERT L; COLLABORATIVE RESEARCH COMPUTER BASED TECHNOLOGY TRANSFER IN CIVIL ENGINEERING (KOJ2971 X00°); 12 MONTHS \$73,700

## CONNECTICUT

### YALE UNIVERSITY

WEGENER, PETER P; BUBBLE INDUCED VERTICAL MASS TRANS-PORT IN WATER (KOJJ058 X00°); 12 MONTHS \$18,500

## DISTRICT OF COLUMBIA

### GEORGE WASHINGTON UNIVERSITY

TORIDIS, THEODORE G: ULTIMATE STRENGTH OF BUILDING SYSTEMS SUBJECTED TO DYNAMIC LOADS (KOJ4051 X00): 12 MONTHS

CHI. S W: WIND LOADINGS OF GROUND STRUCTURES IN INTENSE ATMOSPHERIC VORTICES (Kos4032); 12 MONTHS \$16,500

### NATIONAL ACADEMY OF ENGINEERING

DILLON, ROBERT M. SUPPORT OF THE U.S. NATIONAL COMMITTEE FOR THE INTERNATIONAL COUNCIL FOR BUILDING RESEARCH STU-DIES AND DOCUMENTATION (C#10186 001): 12 MONTHS \$30,000

### NATIONAL ACADEMY OF SCIENCES

DILLON, ROBERT M: PRECOORDINATED SUBSYSTEMS FOR BUILD-ING (CJ104J7); 15 MONTHS \$15,000

NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL CLIFFE, ROBERT A: INSPECTION OF DAMAGE DUE TO NATURAL DISASTERS (CJ10115 008); 12 MONTHS \$14,300



### MORIDA

UNIVERSITY OF FLORIDA

PARTHENIADES, EMMANUEL; DEPOSITION OF FINE SEDIMENTS IN TURBULENT FLOWS (KOS1858); 24 MONTHS 449,700

UNIVERSITY OF FLORIDA-ENGINEERING & INDUSTRIAL EXPERIMENT STATION

SHENDIN, O H; GENERATION AND GROWTH OF WIND WAVES (Katieds); 24 MONTHS \$139,700

SHEMDIN, O. H.; LABORATORY INVESTIGATION OF GENERATION AND GROWTH OF WIND WAVES (KOJ1603 DOI\*1), 10

NEVILL, G E IR; LOWER BOUNDS ON DISPLACEMENTS OF DYNAMI-CALLY LOADED STRUCTURES (KOJLOJO): 12 MONTHS \$30,300

UNIVERSITY OF MIAMI-SCHOOL OF MARINE AND ATMOSPHERIC SCIENCES

VAN DE KREEKE, 1; RESEARCH INITIATION - INVESTIGATION INTO THE TIDE-INDUCED MASS TRANSPORT IN SHALLOW LAGOONS (ROJESJ4); 18 MONTHS \$16,000

#### GEORGIA

GEORGIA INSTITUTE OF TECHNOLOGY

WINER, WARD O, AND SANBORN, DAVID M; RNEOLOGICAL EFFECTS IN THIN FILM LUBRICATION (KOS1154); 24 MONTHS \$69,100

BROWN, RUSSELL H; RESEARCH INITIATION - PREDICTION OF COM-PRESSIVE STRENGTH OF MASONRY STRUCTURAL SYSTEMS (ROJSEIS); 18 MON? - \$15,900

### HAWAII

UNIVERSITY OF HAWAIL

HARRENSTIEN, H P; INTERNATIONAL CONFERENCE ON HYDROMECHANICALLY LOADED SHELLS (KOJO116); 14 MONTHS \$15,900 GERSCH, WILL, AND NIELSEN, N NORBY; THE IDENTIFICATION OF RANDOMLY EXCITED LINEAR STRUCTURAL SYSTEMS (KOJ1478); 24 MONTHS \$131,800

#### ILLINOIS

ILLINOIS INSTITUTE OF TECHNOLOGY

BARNETT, RALPH L; MINIMUM COST STRUCTURAL DESIGN BASED ON NONDESTRUCTIVE PROOF TESTING (KOJOSIS); 24 MONTHS \$43,300 LEONARD, JOHN W; NONLINEAR DYNAMICS OF CABLE NETWORKS AND REINFORCED MEMBRANES WITH SMALL INITIAL TENSIONS (KOJIOJI); 24 MONTHS \$12,200

NORTHWESTERN UNIVERSITY

ACHENBACH, JAN D: FRACTURE OF BRITTLE MATERIALS UNDER IMPACT LOADS (Kossett), 24 MONTHS \$54,200

NEMAT-NASSER, S; CONSISTENCY AND ERROR-ESTIMATE IN NU-MERICAL ANALYSIS OF PRE- AND POST-CRITICAL RESPONSE OF ELASTIC CONTINUA AT FINITE STRAINS (KAJIJJ); 24 MONTHS \$44,500

MURA, TOSHIO; A VARIATIONAL PRINCIPLE FOR MICRO-MECHANICS OF COMPOSITE MATERIALS (KOSIOSO X09): 12 MONTHS \$23,400

UNIVERSITY OF ILLINOIS AT URBANA

ANG, ALFREDO H S; PROBABILISTIC ASPECTS OF STRUCTURAL MECHANICS RELEVANT TO SAFETY AND DESIGN (KOOISIA XOA); 12 MONTHS \$44,800

KARARA. H M; RATIONAL DESIGN OF CLOSE-RANGE PHOTOGRAM-METRIC SYSTEMS (K011685 001); 12 MONTHS \$41,200

HOLLEY, E R; TRACER MIXING FOR DISCHARGE MEASUREMENTS IN PIPES (KOLIPII); 24 MONTHS 149300

LAWRENCE, F V JR, YOUNG, J F, AND HILSDORF, H K: IMPROVE-MENT OF THE MECHANICAL PROPERTIES OF PORTLAND CEMENT CONCRETE (KOJO774 XOO); 12 MONTHS \$85,200

LIN. Y K; RANDOM VIBRATIONS OF ALMOST PERIODIC STRUCTURES (KOLLIJE X00): 12 MONTHS \$41 900

### INDIANA

PURDUE UNIVERSITY

KOYACS, WILLIAM D; THE LIQUEFACTION BEHAVIOR OF SATURATED SANDS IN CYCLIC SIMPLE SHEAR (KOJOJES), 12 MONTHS \$9,100

YAO, IAMES TP; RELIABILITY IN THE DESIGN OF STRUCTURES FOR DYNAMIC LOADS (KOJOSSI); 24 MONTHS \$64,100

SCHIFF, ANSHEL J; DETERMINING DYNAMIC STRUCTURAL RESPONSE (KOJISST); 24 MONTHS \$91,400

UNIVERSITY OF NOTRE DAME

NEE, VICTOR W, AND YANG, KWANG-TZU; PHENOMENOLOGICAL AP-PROACH TO TURBULENT BOUNDARY-LAYERS (KOJIOZI); 24 MONTHS 888 MO

NEE, VICTOR W; FEASIBILITY STUDY OF A MULTI-PURPOSE METEOROLOGICAL WIND TUNNEL (KOLLIER), 12 MONTHS \$60,000

#### **10WA**

10WA STATE UNIVERSITY OF SCIENCE & TECHNOLOGY

KIRKHAM, DON; NON-ORTHONORMAL POLYNOMIAL METHOD AP-PLIED TO SOME POTENTIAL FLOW PROBLEMS (KOSINT): 24 MONTHS

DEMIREL, TURGUT, AND LOHNES, ROBERT A: CLAY STRENGTH AND RATE PROCESS THEORY (KOS 1081 X00), 18 MONTHS \$22,000

#### KENTUCKY

UNIVERBITY OF KENTUCKY

BROCK, LOUIS M; RESEARCH INITIATION - INTERFACE FLAW EXTENSION IN LAMINATED COMPOSITE MATERIALS (KOSSEIT); 18 MONTHS \$15,300

HSU, NELSON N; RESEARCH INITIATION - STRESS ANALYSIS USING THE ACOUSTICAL BIREFRINGENCE OF ULTRASONIC WAVES (KOJESIS); 18 MONTHS \$15,900

#### LOUISIANA

TULANE UNIVERSITY

COWIN, S.C; GRAVITY FLOW OF GRANULAR MATERIALS (KOS1071); 24 MONTHS \$58,700

#### MARYLAND

JOHNS HOPKINS UNIVERSITY

ERICKSEN, J L; NONLINEAR CONTINUUM THEORIES (KOI3306 001); 24 MONTHS \$86,000

CORRSIN, STANLEY; FLUID MECHANICS PROBLEMS RELATED TO BIOLOGICAL FLOW PHENOMENA (KOSSOSS X01): 12 MONTHS \$46,100 DAVIS, STEPHEN H; INTERFACIAL FLUID DYNAMICS (KOSSOSS); 24 MONTHS \$57,850

CORRSIN. STANLEY: BASIC RESEARCH ON TURBULENT FLOW AND ITS EFFECTS (KOS4016): 12 MONTHS \$31,000

UNIVERSITY OF MARYLAND, COLLEGE PARK

ASIMOW, R M; PLANE STRESS FATIGUE CRACK PROPAGATION (KOSISTS); 12 MONTHS \$7.400

HOLLOWAY, DAVID C; RESEARCH INITIATION - INVESTIGATIONS INTO THE HOLOGRAPHIC AND DIFFRACTION METHODS IN DYNAMIC STRESS ANALYSIS (KOSSOSO); 18 MONTHS \$16,000

REBUCK, ERNEST C; RESEARCH INITIATION NUMERICAL AND FIELD EVALUATION OF UNCONFINED FLOW TO A SINGLE WELL (Kastes); 18 MONTHS \$16,000

## MASSACHUSETTS

BOSTON ARCHITECTURAL CENTER

WILSON, DUNCAN M; FIRST INTERNATIONAL SYSTEMS BUILDING ROUND TABLE DISCUSSION CONFERENCE (KOJORIS): 12 MONTHS \$18,500 WILSON, DUNCAN M; FIRST INTERNATIONAL SYSTEMS BUILDING ROUND TABLE DISCUSSION CONFERENCE (KNJORIS (OI); 6 MONTHS \$2,000

HARVARD UNIVERSITY

MCMAHON, THOMAS A; RESEARCH INITIATION · RHEOLOGY OF SUSPENSIONS DOPPLER FLOWMETER EXPERIMENTS (KO32664); 18 MONTHS \$16,000

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

MCCLINTOCK, FRANK A, AND ARGON, ALI S; MECHANICS OF DUC-TILE FRACTURE (KOO1875 XO2); 12 MONTHS \$103,200

CRANDALL, STEPHEN H; SOUND REINFORCEMENT BY STRUCTURAL INTERACTION (K010160 002); 6 MONTHS \$13,500

NEWMAN, JOHN N; APPLICATIONS OF WATER-WAVE THEORY TO FLOATING BODIES (K010846 001); 24 MONTHS \$65,000

KEIL, ALFRED H: SYSTEMATIC SUPPORT FOR MARINE APPLIED MECHANICS (K020189 X01), 12 MONTHS \$78,200

LYON, RICHARD H; SOUND TRANSMISSION IN BUILDINGS (KO24755 XO1); 12 MONTHS \$89,900

HANSEN, BOBERT J; RESEARCH IN BUILDING SYSTEMS (KORSSID XOI): 15 MONTHS \$186,300 DEVANNEY, J W; STUDY OF HARBOR TRAFFIC CONTROL (KOSOSA); 22

MONTHS \$58,400
SHAPIRO ASCURE H AND LARREN MIGHT! V. CELE MUNICIPAL V.

SHAPIRO, ASCHER H, AND JAFFRIN, MICHEL Y; SELF-INDUCED DIF-FUSION OF SOLID PARTICLES IN SUSPENSIONS (KOJIISJ), 24 MONTHS \$10,600

JAFFRIN, MICHEL Y; OSCILLATORY FLUID FLOW IN LUNGS (KG\$1808); 24 MONTHS \$52,100

GELHAR, LYNN W; INTERACTION BETWEEN TURBULENT FLOWS AND PERMEABLE BOUNDARIES (KOS1774 XOO); 12 MONTHS \$24,100

MADSEN, OLE S; RESEARCH INITIATION - THE STABILITY OF A SAND BED UNDER THE ACTION OF BREAKING WAVES (KOS2665); 18 MONTHS \$16,000

WILLIAMS. JAMES H JR; RESEARCH INITIATION-FRACTURE MECHANISMS OF GRAPHITE COMPOSITES DUE TO PARTICLE IMPINGEMENT (KO33671): 18 MONTHS \$18,000

MILGRAM, JEROME H; WAVE EFFECTS ON THE CONTAINMENT AND COLLECTION OF OIL SLICKS (KOSSOIG), 12 MONTHS \$60,000



LAMBB, T WILLIAM; PREDICTING THE PERFORMANCE OF CONSTRUCTED FACILITIES (KOS 4018); 12 MONTHS \$100,000

### UNIVERSITY OF MASSACHUSETTS, AMBERST

BOOTHROYD, GEOFFREY, AND MCLENNAN, GEORGE A; INTERFACE DAMPING IN MACHINE TOOL STRUCTURES (KON1860); 24 MONTHS \$49,100

KIRCHHOFF, ROBERT H; THE DIRECT MEASUREMENT OF VELOCITY GRADIENTS IN FLUID FLOW (KOOGIJ); 18 MONTHS \$11,500

ARCHER, ROBERT R; SOME CONTINUUM MECHANICAL MODELS FOR THE STUDY OF PLANT GROWTH PHENOMENON (KGG1490): 24 MONTHS \$70,100

CROSSLEY, F R ERSKINE; DYNAMICS OF MECHANISMS WITH TWO REGIMES AND SHOCK (KOSESTS), 24 MONTHS \$43,900

CROSSLEY, F R E, AND LIANDER, BERTIL; WORKSHOP ON NATIONAL PRODUCTIVITY IN DURABLE GOODS MANUFACTURING (KOJIJSO); 12 MONTHS MALOO

### MICHIGAN

#### UNIVERSITY OF MICHIGAN

LUDEMA, KENNETH C; ELASTO-HYDRODYNAMICS AND WET TIRE TRACTION (KOJOLIO), 24 MONTHS \$48,700

WILLMARTH, WILLIAM W; STRUCTURE OF TURBULENCE IN THE BOUNDARY LAYER (KONOSES); 24 MONTHS \$45,100

TAYLOR, JOHN E; ANALYTICAL METHODS FOR OPTIMAL STRUCTURAL DESIGN (KOJLISS); 24 MONTHS \$48,600

CHACE, MILTON A: GENERALIZED DYNAMICS OF MACHINERY DETERMINATION AND DEVELOPMENT OF ANALYTICAL AND COMPUTER METHODS (KOS1800): 24 MONTHS \$65,100

SHERMAN, PAULINE M, AND GLASS, D R; AN INVESTIGATION OF ACOUSTIC FEEDBACK FOR THE REDUCTION OF JET NOISE (KOJJBO); 18 MONTHS 440 000

### WAYNE STATE UNIVERSITY

WHITMAN, A B, AND DESILVA, C N; NONLINEAR RESPONSE OF RODS AND SHELLS TO TIME-DEPENDENT LOADS AND TEMPERATURE FIELDS (ROJIOSI); 24 MONTHS \$47,500

#### MINNESOTA

### UNIVERSITY OF MINNESOTA

JOSEPH, DANIEL D. STUDIES IN HYDRODYNAMIC STABILITY (KO18500 001); 24 MONTHS \$60,400

FOSDICK, ROGER L; INVESTIGATIONS IN CONTINUUM MECHANICS (KO11139); 24 MONTHS \$55,900

KILLEN, JOHN M. AND WETZEL, JOSEPH M. ZERO-CROSSING-RATE TECHNIQUE FOR SHEAR FLOW MEASUREMENTS (KOSO836); 12 MONTHS \$33,100

FORSTROM, RICHARD J; RESEARCH INITIATION - RED BLOOD CELL PERMEABILITY IN SHEAR FIELDS (KOJ2669); 18 MONTHS \$16,000

ERDMAN, ARTHUR G; RESEARCH INITIATION - KINETO-ELAS-TODYNAMIC DESIGN OF MECHANISMS (KO12678); 18 MONTHS \$15,900 SILBERMAN, EDWARD; THE MECHANISM OF TURBULENCE IN

STEADY HELICAL PIPE FLOW (KOJSET); 12 MONTHS \$27,000 ANDERSON, ALVIN G; DEVELOPMENT OF MEANDER SYSTEMS WITH

AND DENSON, ALVIN G; DEVELOPMENT OF MEANDER SYSTEMS WITH SPECIAL REFERENCE TO THE DISCHARGE SPECTRUM (KOS4041); 12 MONTHS \$33,100

## UNIVERSITY OF MINNESOTA-INSTITUTE OF TECHNOLOGY

LAMBERT, ROBERT F, AND MORAN, JOHN P; PREDICTION AND MEASUREMENT OF SCUND PROPAGATION IN LINED FLOW DUCTS (\*G4404); 12 MONTHS \$37,800

### MISSISSIPPI

### UNIVERSITY OF MISSISSIPPI

PRASAD, SHYAM N. AND GEORGE, K P; SHRINKAGE DEFORMATION IN PANELS OF CRACKED PAYEMENTS (K025604): 24 MONTHS 461,600

### MISSOURI

## UNIVERSITY OF MISSOURI, ROLLA

URAL, OXTAY; SECOND INTERNATIONAL SYMPOSIUM ON LOWER-COST HOUSING PROBLEMS (KG/1504); 12 MONTHS \$4,100

URAL, OKTAY; SECOND INTERNATIONAL SYMPOSIUM ON LOWER-COST HOUSING PROBLEMS (Kosisos cor); 9 MONTHS 85,500

### WASHINGTON UNIVERSITY

WEINBERG, STEVEN L; RESEARCH INITIATION - AN INVESTIGATION OF UPPER URINARY FLUID MECHANICS (KOJ2662); 18 MONTHS \$16,000

### NEBRASKA

### University of Nebraska at Lincoln

ERNST, GEORGE C, AND SMITH, GERALD M; STATIC AND DYNAMIC BEHAVIOR OF REINFORCED CONCRETE FRAMEWORKS (KOJI105); 24 MONTHS \$55,900

### NEW JERSEY

### PRINCETON UNIVERSITY

BOCDONOFF, 8 M, LAM, S H, AND BIENKOWSKI, G K; STUDIES OF HIGH MACH NUMBER LOW DENSITY FLOWS (KOJIPO), X00): 18 MONTHS 479,000

MOON, FRANCIS C; \* & DYNAMICS OF BLASTIC STRUCTURES WITH HIGH CURRENTS (Kol. 314); 24 MONTHS \$65,900

#### RUTGERS UNIVERSITY

PESKIN, RICHARD L: INVESTIGATION OF PARTICLE MOTION IN SHEAR FLOWS (KOS1764 XOD): 12 MONTHS \$39,200

#### NEW YORK

### AMERICAN SOCIETY OF CIVIL ENGINEERS

TAYLOR, DONALD C; CONFERENCE ON THE GOALS OF CIVIL EN-GINEERING RESEARCH- THE RESPONSIVENESS TO THE NEEDS, DESIRES AND ASPIRATIONS OF MAN (KG90789); 12 MONTHS \$10,000

MCPHERSON, MURRAY B: A CONFERENCE ON URBAN WATER POL-ICY- A REVIEW OF PRELIMINARY FINDINGS OF THE NATIONAL WATER COMMISSION (KOJISSE); 9 MONTHS \$9,700

WISELY, WILLIAM H; A FEASIBILITY STIDY FOR THE CIVIL EN-GINEERING SOFTWARE CENTER CONCEPT (ROSILES); 12 MONTHS \$24,900 TURCHICK, ALBERT W; ASCE SYSTEMS BUILDING CONFERENCE (ROSISOS); 8 MONTHS \$10,800

WISELY, WILLIAM H; SUPPORT OF A RESEARCH LECTURE ON PROBLEMS AND SOLUTIONS RELATED TO METRIC CONVERSION IN THE U.S.A. (ROSSIOS); 8 MONTHS \$1,000

TAYLOR, DONALD C; EVALUATION OF CURRENT METHODS OF STRUCTURAL DYNAMICS ANALYSIS USING NUCLEAR-INDUCED TRANSIENT EXCITATION (KOSSITA'S: 12 MONTHS 237000

## AMERICAN SOCIETY OF MECHANICAL ENGINEERS

ADAMCZAK, R L; 1972 ASME-ASLE INTERNATIONAL LUBRICATION CONFERENCE (KOS4157); 12 MONTHS \$10,000

#### CITY COLLEGE

LOWEN, GERARD; OPTIMIZATION OF MASS DISTRIBUTION IN MECHANISMS (KOS1874); 24 MONTHS \$68,800

ZOLLO, RONALD F: RESEARCH INITIATION - EXTRUSION OF WIRE FIBER REINFORCED CONCRETE (Kostsei): 18 MONTHS \$20,000

### COLUMBIA UNIVERSITY

FREUDENSTEIN, FERDINAND; MATHEMATICAL AND KINEMATIC ANALYSIS OF THE SURFACES GENERATED IN PLANE AND SPATIAL MOTIONS OF MECHANISMS (KONSINE); 24 MONTHS \$42,900

### CORNELL UNIVERSITY

SLATE, FLOYD O, AND NILSON, ARTHUR H, NATURE OF THE STRESS-STRAIN RESPONSE AND FRACTURE OF CONCRETE IN BIAXI-AL LOADING (KOS1470); 24 MONTHS \$89,500

### NEW YORK UNIVERSITY

BENNETT, LEON; SEMI-HOVERING AERODYNAMICS (KOSISIS X00); 12 MONTHS \$34,700

KELLER, JOSEPH B; MATHEMATICAL PROBLEMS OF ELECTROMAGNETIC THEORY AND OTHER APPLIED FIELDS (POSSESS X60°); 12 MONTHS \$30,000

### POLYTECHNIC INSTITUTE OF BROOKLYN

GOLDBERG, MARTIN A; THERMOELASTIC STRESS DISTRIBUTION AT A CRACK-TIP (KOS4018); 12 MONTHS \$25,000

### RENSSELAER POLYTECHNIC INSTITUTE

KREMPL, ERHARD; CYCLIC STRAIN HARDENING AND SOFTENING OF STRUCTURAL METALLIC MATERIALS DURING LOW-CYCLE FATIQUE (Kossses); 24 MONTHS \$39,200

MOW, VAN C; BIOMECHANICS OF SYNOVIAL JOINTS (KOJOBAS); 24 MONTHS \$100,000

### STATE UNIVERSITY AT BUFFALO

SOONG, T. T., AND LEE, GEORGE C; STOCHASTIC MODELING AND ANALYSIS OF LUNG TISSUE ELASTICITY (KGJ1219); 24 MONTHS \$70,000

## STATE UNIVERSITY AT STONY BROOK

CHEVRAY, RENE; PREFERENTIAL TRANSPORT IN THE INTERMITTENT REGION OF A HEATED JET ( ) (10); 24 MONTHS \$29,000

TASI, JAMES; RESPONSE OF A L' OCATION IN A LINEAR CHAIN TO A TRAVELLING STRESS WAVE (KOJISIS); 24 MONTHS \$30,400

### SYRACUSE UNIVERSITY

ESKINAZI, 8; CONVECTION OF JETS AT AN ANGLE OF INCIDENCE TO A FREE STREAM (KOJISH); 12 MONTHS \$36,000

LI, WEN-HSIUNG, DISPERSION OF POLLUTANTS IN TIDAL ENVIRON-MENT (KOSSES), 12 MC1-THS \$50,500

LIU. H.W. CYCLE DEFORMATION AND FATIGUE STRENGTH (ROLOID), 12 MONTHS \$31,900

## UNIVERSITY OF ROCHESTER

WEYMANN, HELMUT D; RELAXATION BEHAVIOR OF THIXOTROPIC SUSPENSIONS (KOSOSTA); 24 MONTHS \$55,100

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### WEBB INSTITUTE OF NAVAL ARCHITECTURE

WARD, LAWRENCE W: EXPERIMENTAL DETERMINATION OF SHIP RESISTANCE IN MODEL AND FULL SCALE (KOMOID): 12 MONTHS \$20,100

#### NORTH CAROLINA

### NORTH CAROLINA STATE UNIVERSITY AT RALEIGH

HAVNER, KERRY 8; ANALYTICAL AND QUANTITATIVE STUDIES IN THEORETICAL POLYCRYSTALLINE PLASTICITY (KOJIJIJ); 24 MONTHS \$55,200

### CASE WESTERN RESERVE UNIVERSITY

ADLER, ROBERT J. AND EDWARDS, ROBERT V; SECONDARY FLOW CONTROL OF AXIAL DISPERSION (KOMAIA); 18 MONTHS \$75,000

SAADA. ADEL B: STRESS-STRAIN RELATION AND FAILURE OF ANISOTROPIC NATURAL CLAYS (KOSIOI): 8 MONTHS \$8,000

#### ORIO STATE UNIVERSITY

WELLS, MICHAEL K; RESEARCH INITIATION - NONINVASIVE MEA-SURBMENT OF PHYSIOLOGICAL FLOW PARAMETERS (KOSESS): 18 MONTHS \$20,000

WU, TH, AND HOOPER, JR; ENVIRONMENTAL INFLUENCES ON STA-BILITY OF SOIL MASSES (KANIOSS XOO); 12 MONTHS \$48,100

### OKLAHOMA

### OKLAHOMA STATE UNIVERSITY

MCLAUGHLIN, DENNIS K; RESEARCH INITIATION - INTERACTION OF INSTABILITIES AND ACOUSTIC RADIATION IN LAMINAR JETS (Kojaese): 18 MONTHS \$16,000

#### PENNISYLVANIA

### CARNEGIR-MELLON UNIVERSITY

HUGHES, W F, AND ROULEAU, W T; WAVES, TRANSIENTS AND STA-BILITY IN VISCOUS AND HYDROMAGNETIC FLUID FLOW (KOJIOW), 18 MONTHS SAS 700

AU. TUNG, AND WONG, ANDREW & C; SYSTEMS APPROACH TO EN-VIRONMENTAL PLANNING AND DESIGN (ROSIOSO); 24 MONTHS \$93,000 DYM, CLIVE L: OPTIMUM DESIGN OF PARTITIONS FOR MINIMUM

SOUND TRANSMISSION (KOJ1747); 24 MONTHS \$43,600

PARTI BRNEST W; RESEARCH INITIATION - A COMPUTERIZED LAYOUT MODEL FOR URBAN REGIONAL PLANNING (KOSEGIE); 18

MONTHS \$16,000 PENVES. STEVEN J; COLLABORATIVE RESEARCH. COMPUTER BASED TECHNOLOGY TRANSFER IN CIVIL ENGINEERING (KOSSO70

X00°); 12 MONTHS \$34,500 CRISE, T A, AND SWEDLOW, J L; STUDIES IN THREE-DIMENSIONAL. BLASTO-PLASTICITY (KON1014); 12 MONTHS \$37,900

### DREXEL UNIVERSITY

BAMEL, B B; COLLABORATIVE RESEARCH- ANALYTICAL STUDY OF A NEW GASEOUS SEPARATION PROCESS (KOJOJAJ); 24 MONTHS \$47,300

## LEHICH UNIVERSITY

ERDOGAN, FAZIL; MICROMECHANICS AND FRACTURE OF COM-POSITE MATERIALS (KO11977 001); 24 MONTHS \$79,000

BEEDLE, LYNN S; THIRD EDITION OF THE COLUMN RESEARCH COUNCIL 'GUIDE'- DESIGN CRITERIA FOR METAL COMPRESSION MEMBERS (KO1618 001); 12 MONTHS \$7,000

TALL. LAMBERT; RESIDUAL STRESSES IN THICK WELDED PLATES (X018010 X01): 12 MONTHS \$48,800

BEEDLE, LYNN 8, AND LU. LE WU; U. S. REGIONAL CONFERENCE ON PLANNING AND DESIGN OF TALL BUILDINGS (KOMPES); 12 MONTHS \$45 400

BEEDLE, LYNN S; PLANNING AND DESIGN OF TALL BUILDINGS (KOS) 49 X00); 12 MONTHS \$191,200

BEEDLE, LYNN S; PLANNING AND DESIGN OF TALL BUILDINGS (X0J140 X61); 12 MONTHS \$20,700

BEEDLE, LYNN S; INTERNATIONAL CONFERENCE ON PLANNING AND DESIGN OF TALL BUILDINGS (KOSIS47): 12 MONTHS \$98,600

BEEDLE, LYNN B; CONFERENCE ON STABILITY PROBLEMS OF NOVEL BUILDING SYSTEMS (Kastele); 12 MONTHS \$6,000

GRAP, WALTER H; RESERVOIR SEDIMENTATION (KOSIOSO KOO); 12 MONTHS \$38,000

SIH, GEORGE C.M; CONFERENCE ON DYNAMIC CRACK PROPAGA-TION (KOS4757); 12 MONTHS \$3,000

RIVLIN, R S; NON-LINEAR WAVE PROPAGATION (POSITION): 12

### PENNSYLVANIA STATE UNIVERSITY

DEGELMAN, LARRY O, AND WITT, DONALD R; WEATHER SIMULA-TION SYSTEM FOR ANNUAL ENERGY ANALYSIS FOR BUILDINGS (KOJ1788); 24 MONTHS \$150,000

### UNIVERSITY OF PENNSYLVANIA

ABEL, JACOB M: EXPLICIT SYNTHESIS OF LIAPOUNDY FUNC-TIONALS FOR CONTINUOUS SYSTEMS (KOJ1072); 24 MONTHS \$33,900

BYANS, NORMAN A; LOW SPEED SHEAR FLOW AROUND BLUFF BODIES (KOSTISS): 24 MONTHS \$61,500

#### UNIVERSITY OF PITTERUPOR

CHIU. CHAO-LIN: STOCHASTIC SIMULATION OF FLOWS IN NATURAL STREAMS AND RIVERS (KOJOSIS): 24 MONTHS \$60,000

#### **PHODE ISLAND**

### BROWN UNIVERSITY

LIU, J T C; WAKE INSTABILITY, BREAKDOWN AND TRANSITION (K010008 001); 24 MONTHS \$55,700

FINDLEY, W N; EFFECT OF TEMPERATURE ON NONLINEAR VISCOELASTIC BEHAVIOR (KOLUJJ): 24 MONTHS \$48,900

DUFFY, JACQUES: INGLASTIC RESPONSE OF METALS TO DYNAMIC BIAXIAL STRESSES (KOMOOM XOI); 12 MONTHS \$29,500

KARLSSON, STURE K F; EXPERIMENTAL STUDIES OF THE STABILI-TY OF LAMINAR AND TURBULENT FLOWS (KOJOWA); PA MONTHS \$59,400 DUFFY, JACQUES: VISCOELASTIC PROPERTIES OF HUMAN MUSCLE (KOJUSI): 12 MONTHS \$87,800

### **SOUTH DAKOTA**

### SOUTH DAKOTA STATE UNIVERSITY

LUMSDAINE, EDWARD: COMPRESSOR NOISE REDUCTION WITH A SONIC INLET (KOOSONO 001); 24 MONTHS \$38,700

#### RICE UNIVERSITY

AUSTIN. WALTER J: UNSYMMETRICAL BENDING AND BUCKLING OF ARCHES (KO14041); 24 MONTHS \$58,000

### TEXAS TECH UNIVERSITY

BELL, CLARENCE A; RESEARCH INITIATION - DYNAMIC CHARAC-TERISTICS OF PNEUMATIC TIRES (KOSTAST); 18 MONTHS \$20,000 MEHTA, KISHOR C, AND MINOR, JOSEPH E; STUDIES IN WIND EN-

GINEERING (KOS4015); 12 MONTHS \$61,000

### UNIV OF TEXAS AT AUSTIN

BREEN, JOHN E: BEHAVIOR OF FRAMES WITH CONCRETE COLUMNS OF UNEQUAL STIFFNESS (KOS1069); 24 MONTHS \$16,000

MOORE, WALTER L; EFFECT OF EFFLUENT AND INFLUENT SEEPAGE ON SEDIMENT MOTION (KOS/P46); 12 MONTHS \$22,000

STERN, MORRIS, AND BEDFORD, ANTHONY; THE MIXTURE THEORY OF COMPOSITE MATERIALS (KOISOSS); 24 MONTHS \$41,400

### UNIVERSITY OF HOUSTON

WHEELER, LEWIS T. AND NACHLINGER, R RAY: UNIQUENESS OF SOLUTIONS IN NONLINEAR SOLID MECHANICS (ROS1070): 24 MONTHS \$45,900

HUSSAIN, A K M FAZLE; RESEARCH INITIATION - THE NEAR FLOW FIELD OF A PLANE TURBULENT JET (KOSESSES); 18 MONTHS \$16,000

### UNIVERSITY OF ST THOMAS

GOLDMAN, JOSEPH L; STORM CHARACTERISTICS OF THE LUBBOCK TORNADO (Ko27741 001); \$15,534

GOLDMAN, JOSEPH L. STORM CHARACTERISTICS OF THE LUBBOCK TORNADO (K027741 001); \$5,800

### UTAH

### UNIVERSITY OF UTAH

FOLIAS, E S; EFFECT OF THICKNESS IN FRACTURE MECHANICS (Kasiais): 12 MONTHS \$25,000

### VIRGINIA

### OLD DOMINION UNIVERSITY

BASS, BENNETT B: RESEARCH INITIATION-THE DYNAMIC FOUNDA-TION OF GIBB'S INSTABILITY CRITERION (KOMEIN); 18 MONTHS \$16,000

JACOBSON, IRA D. RESEARCH INITIATION . ATMOSPHERIC SUR-FACE LAYER SIMULATION (KOSSESS), 18 MONTHS \$16,000

### VIRGINIA POLYTECHNIC INSTITUTE

FUREY, MICHAEL J; SOURCES OF FRICTION AND WEAR BETWEEN SOLIDS IN RELATIVE MOTION (KOS1078); 24 MONTHS \$41,500 TELIONIS, DEMETRIOS P; RESEARCH INITIATION-THE BOUNDARY-

LAYER (Koseeee); 18 MONTHS \$15,700

### WASHINGTON

### UNIVERSITY OF WASHINGTON

HENNES, R G; INTERNATIONAL CONFERENCE ON MICROZONATION (K033318°): 12 MONTHS \$14,000

MATTOCK, ALAN H; SHEAR TRANSFER IN REINFORCED CONCRETE (Kossata Xoo): 12 MONTHS \$46,400

### WASHINGTON BTATE UNIVERSITY

FLECHSIG, ALFRED J JR: RESEARCH INITIATION - A DECISION-MAK-ING MECHANISM FOR HOUSING (KOSSESS); 18 MONTHS \$20,000



### WISCONSIN

UNIVERSITY OF WISCONSIN, MADISON

KESSEL, PHILIP O: DYNAMIC RESPONSE OF ROTATING CIRCULAR CYLINDRICAL SHELLS (KOSSBOS), 24 MONTHS \$41,700

UICKER, JOHN J JR, AND LIVERMORE, DONALD F; ANALYSIS OF MECHANISMS BY MATRIX METHODS (KOSSTES): 18 MONTHS \$5,900

### WYOMING

# UNIVERSITY OF WYOMING

RANDLES, PHILIP W: RESEARCH INITIATION-THE IMPULSIVE RESPONSE OF LAMINATES (KOMMA); 18 MONTHS \$16,800

EVERS, JOHN P; RESEARCH INITIATION · ELECTRIC LOG EVALUA-TION OF FRESH WATER AQUIFERS IN THE CENTRAL ROCKY MOUN-TAINS (Kosseis), 18 MONTHS \$14,600

# ELECTRICAL SCIENCES AND ANALYSIS

#### ARIZONA

## UNIVERSITY OF ARIZONA

KORN, GRANINO A; ON-LINE ALL-DIGITAL SIMULATION (KOISELL 001): 12 MON THS \$32,600

HILL, FREDERICK J; OPTIMAL TESTING OF LARGE SCALE IN-TEGRATED SEQUENTIAL LOGIC CIRCUITS (KO29249 XOI); 12 MONTHS

HAMILTON, DOUGLAS J. AND KERWIN, WILLIAM J; ELECTROTHER-MAL INTEGRATED CIRCUITS (KOSIDOS) 24 MONTHS \$60,400

JOHNSON, V R, AND TURNER, A F; INTEGRATED OPTICS IN OPTICAL COMMUNICATION SYSTEMS (KOUSES); 12 MONTHS \$79.400

#### ARKANSAS

## UNIVERSITY OF ARKANSAS

COOK, K R, AND WAITE, W P; MICROWAVE SYSTEMS FOR REMOTELY MEASURING ECOLOGICAL PARAMETERS (ROJISIS); 24 MONTHS \$52,600 COOK, K R, AND WAITE, W P; MICROWAVE SYSTEMS FOR REMOTELY MEASURING ECOLOGICAL PARAMETERS (ROSISIS 001); \$1,100

### CALIFORNIA

# CALIFORNIA INSTITUTE OF TECHNOLOGY

YARIV, AMNON; INTEGRATED OPTICAL CIRCUITS USING ION IM-PLANTATION (KOSISSS); 24 MONTHS \$79,300

GEORGE, NICHOLAS: REAL-TIME OPTICAL DATA PROCESSING (Karetse): 24 MONTHS \$61,000

# CALIFORNIA STATE UNIVERSITY, SACRAMENTO

CRALL, RICHARD F. RESEARCH INITIATION - COMPUTER AIDED DESIGN OF DIGITAL SYSTEMS (KOJETIS); IE MONTHS \$19,100

## STANFORD UNIVERSITY

VEINOTT, ARTHUR F JR; DYNAMIC INVENTORY MODELS AND RE-LATED OPTIMIZATION METHODS (KOJESIS 001); 24 MONTHS \$61,100 KAILATH, THOMAS; INTERNATIONAL SYMPOSIUM ON INFORMATION

THEORY (KOSISSE); 12 MONTHS \$1,500 GOODMAN, JOSEPH W. AND GRAY, ROBERT M; HOLOGRAPHIC MENO-RIES WITH HIGH INFORMATION EFFICIENCY (KOSI606): 24 MONTHS

KAILATH, THOMAS; CONVOLUTION CODING, ESTIMATION AND DE-TECTION (KOJ1627); 12 MONTHS \$34,600

GRAY, ROBERT M: RATE DISTORTION APPROACH TO DATA COM-PRESSION (KOSIESO), 24 MONTHS \$48,200

LUENBERGER, DAVID G. OPTIMIZATION TECHNIQUES (KOSIS70): 24 MONTHS \$64,600

HELLMAN, MARTIN E; FINITE MEMORY AND BRANCHING RANDOM WALKS (KOSSSSO); 12 MONTHS \$25,300

WIDROW, BERNARD, ADAPTIVE CONTROLS WITH BIOMEDICAL AP-PLICATIONS (Kossiso), 12 MONTHS \$38,300

COVER, THOMAS M: BROADCAST CHANNELS AND INFORMATION THEORY (KOSISES); 24 MONTHS \$74,400

## UNIVERSITY OF CALIFORNIA, BERKELEY

RUH, E S, AND DESOER. C A; SYSTEM THEORY RESEARCH (KOIO656 X02); 12 MONTHS \$155,000

VAN DUZER, T. TUNNELING DEVICES AS SUPERCONDUCTING COM-PUTER ELEMENTS (Kosiets Xoo); 12 MONTHS \$15,000

MULLER, R S; PIEZOELECTRIC FIELD-EFFECT TRANSDUCERS (Kastite); 24 MONTHS \$30,400

CHUA, L O, NONLINEAR NETWORKS AND SYSTEMS (KOJ2248); 24

MONTHS \$49,700 JURY, E 1; TWO DIMENSIONAL DIGITAL FILTERS (KOSSIST); 12
MONTHS \$25,500

SCHWARZ, S E: SLOW WAYES AND TRAVELING-WAVE INTERACTIONS IN SEMICONDUCTORS (Kossele): 12 MONTHS \$19,200

GUSTAFSON, T K; METAL-OXIDE-METAL DIODES IN OPTICAL COM-MUNICATION SYSTEMS (KOSISS): 24 MONTHS \$62,200

# University of California, los angeles

YEH, CAVOUP; MOVING CHARGED PARTICLES IN COMPLEX MATERIAL MEDIA (KOSS'S) XOI); 12 MONTHS \$26,000

KARPLUS, W J. SYSTEM IDENTIFICATION USING HYBRID AND ON. LINE COMPUTATION (KOSI (65 X00); 12 MONTHS \$11,200

ARUNKUMAR, SUBRAMANI, AND JACOBSEN, STEPHEN E; OPTIMAL INVESTMENT IN NETWORKS WITH NONCONVEX COSTS (ROSERS): 12 MONTHS \$28,500

GEOFFRION, ARTHUR M; OPTIMIZATION OF LARGE SCALE SYSTEMS (PO26294 001\*); 12 MONTHS \$11,700

# UNIVERSITY OF CALIFORNIA, SAN DIEGO

LOHMANN, ADOLF W: HOLOGRAPHIC INFORMATION PROCESSING (Kozeses Xos): 12 MONTHS \$41,000

HELSTROM, CARL W; APPLICATION OF SIGNAL DETECTION THEORY TO OPTICAL COMMUNICATION (KOSSSII); 12 MONTHS \$19,300

# UNIVERSITY OF SOUTHERN CALIFORNIA

DAVISSON, LEE D; NONPARAMETRIC AND ADAPTIVE TECHNIQUES IN COMMUNICATIONS (KOLLISO COL): 24 MONTHS \$53,100

REED, IRVING S. AND SCHOLTZ, ROBERT A: DESIGN OF COMMUNICATION SIGNALS (ROSSID): 12 MONTHS \$16,800 MAHI, NASSER E, AND SILVERMAN, LEONARD, RECURSIVE IMAGE ENHANCEMENT (Kossais), 12 MONTHS \$40,800

SWORDER, DAVID D; CONTROL OF DYNAMICAL SYSTEMS WITH RAN-DOM PARAMETERS (KOSSELT); 12 MONTHS \$23,700

### COLORADO

### COLORADO STATE UNIVERSITY

ALLEN, J L; INHOMOGENEOUS COUPLED LINE FILTERS (KOSJOPO); 24 MONTHS \$40,000

# UNIVERSITY OF COLORADO

BARNES, FRANK; A WORKSHOP ON NON-IONIZING RADIATION (Kots134 001); \$4,200

HOROWITZ, ISAAC; DESIGN OF SYSTEMS WITH LARGE PARAMETER IGNORANCE (KOSTISS); 12 MONTHS \$47,100

## CONNECTICUT

# UNIVERSITY OF CONNECTICUT

COHEN, ARNON; RESEARCH INITIATION - TRANSIENT RESPONSE OF ION SELECTIVE ELECTRODES (KOJESST); 18 MONTHS \$15,000

## YALE UNIVERSITY

MORSE, A STEPHEN; ADVANCED STUDIES OF LARGE SCALE AUTO-MATIC CONTROL SYSTEMS (KOJ0098): 12 MONTHS \$13,000

MIFFLIN. ROBERT B; RESEARCH INITIATION . NONLINEAR PRO-GRAMMING (KO12710); 18 MONTHS \$15,000

## DISTRICT OF COLUMBIA

# GEORGE WASHINGTON UNIVERSITY

PICKHOLTZ, RAYMOND L: MODELS AND ANALYSIS OF DATA NET-WORKS (KOSSSSE); 12 MONTHS \$24,000

### GEORGIA

# GEORGIA INSTITUTE OF TECHNOLOGY

KAMEN, EDWARD W; RESEARCH INITIATION . LINEAR TIME-VARY. ING SYSTEMS (KOJ2697); 18 MONTHS \$16,000

BROWN, JAMES E III, RESEARCH INITIATION . STOCHASTIC AP-PROXIMATION ALGORITHMS (KOS2889); 18 MONTHS \$16,000

### HAWAH

## UNIVERSITY OF HAWALL

LIN, SHU, AND WELDON, E J; PROBLEMS IN ERROR CORRECTING CODES (KO25138 001); \$17,000

# ILLINOIS INSTITUTE OF TECHNOLOGY

COSTELLO, DANIEL J JR; CONVOLUTION CODES FOR ERROR CON-TROL (Kossess); 14 MONTHS \$28,100

## NORTHWESTERN UNIVERSITY

PIERSKALLA, WILLIAM P. POLICY STUDIES FOR PERISHABLE IN-VENTORIES (KO21792 001): 12 MONTHS \$21,600

VAN NESS, JAMES E; LARGE SCALE DYNAMIC SYSTEMS (KOJ3880°): 24 MONTHS \$40,000

# UNIVERSITY OF ILLINOIS AT CHICAGO CIRCLE

SANATHANAN, C. K; SIMULATION OF DISTRIBUTED PARAMETER AND NONLINEAR SYSTEMS (KOSI857); 24 MONTHS \$38,700

# UNIVERSITY OF ILLINOIS AT URBANA

SAH, CHIH-TANG; CIRCUIT MODELS OF SEMICONDUCTOR DEVICES (Kojoesj); 24 Months \$67,700

TRICK, TIMOTHY N. STEADY STATE ANALYSIS OF NONLINEAR CIR-CUITS (Kosiess); 24 MONTHS \$41,900

LO, Y T, AND LEE, S W; CORRUGATED WAVEGUIDES AND HORNS FOR PRODUCING CIRCULARLY POLARIZED WAVES (KOJITSI); 24 MONTHS \$30,800

QADDY, O L; DYNAMIC CROSSED-FIELD PHOTOMULTIPLIER

(Kossess); 24 MONTHS \$40,000

MITTRA, RAJ, AND LEE, SHUNG-WU; COMMUNICATIONS IN HIGH SPEED GROUND TRANSPORTATION SYSTEMS (KOSSISS); 24 MONTHS \$40,000

#### INDIANA

### AMERICAN AUTOMATIC CONTROL COUNCIL

MCRUER, DUANE T; SPECIALIZED WORKSHOPS ON PATTERN AND CHARACTER INFORMATION PROCESSING (KGJ4430); 12 MONTHS \$49,400

#### PURDUE UNIVERSITY

NEWHOUS, V L, AND GUNSHOR, R L; MICROWAVE SOLID STATE DEVICE RESEARCH (KOI1858 001); 12 MONTHS \$28,100

LEON, B J; PROBLEMS IN NONLINEAR CIRCUITS AND SYSTEMS (KO21930 001); \$5,100

VEMURI, V; INITIAL-VALUE METHODS FOR PROBLEM-ORIENTED LANGUAGES (KO\$1786); 12 MONTHS \$26,400

BASS, STEVEN C; RESEARCH INITIATION - KODELLING OF HYSTERESIS PHENOMENA (KOSSESS); 18 MONTHS \$15,000 HUGHES, GEORGE W, AND LI, KUNG-PU; STATISTICAL TECHNIQUES

IN SPEECH SIGNALS (KOJ1788); 24 MONTHS \$14,800

### UNIVERSITY OF NOTRE DAME

LIU, RUEY-WEN, AND SAEKS, RICHARD; LARGE-SCALE DYNAMICAL SYSTEMS (KOJ1808); 24 MONTHS \$57,500

#### **IOWA**

### IOWA STATE UNIVERSITY OF SCIENCE & TECHNOLOGY

MICHEL, ANTHONY N; STABILITY OF INTERCONNECTED SYSTEMS (Kojs739); 24 MONTHS \$37,800

### UNIVERSITY OF IOWA

CHYUNG, DONG H; CONTROL SYSTEMS WITH TIME DELAYS (KOSI688); 12 MONTHS \$21,000

### KANSAS

### KANSAS STATE UNIVERSITY

LEE, E STANLEY; INVARIANT IMBEDDING AND QUASILINEARIZA-TION IN ENGINEERING SYSTEMS (KO26212 XO2); 12 MONTHS \$24,600

CASEY, KENDALL F JR; ELECTROMAGNETIC WAVE PROPAGATION STUDIES (KOJ:315); 12 MONTHS \$17,300

### UNIVERSITY OF KANSAS

FUNG, ADRIAN K, AND MOORE, RICHARD K; SCATTERING FROM KNOWN ROUGH SURFACES (KOJ3092); 24 MONTHS \$40,000

### MAINE

### UNIVERSITY OF MAINE, ORONO

KAZMERSKI, LAWRENCE L; RESEARCH INITIATION - THIN FILM EN-VIRONMENTAL DETECTOR (KOSSESSI); 18 MONTHS \$16,000

### MARYLAND

## JOHNS HOPKINS UNIVERSITY

DAVIDSON, FREDERIC; DIGITAL CAMERA (KOS4085); 12 MONTHS \$12.500

### UNIVERSITY OF MARYLAND, COLLEGE PARK

HARGER, ROBERT O; COMMUNICATION THEORY FOR OPTICAL COM-MUNICATION SYSTEMS (KOL1920 001); 12 MONTHS \$31,300

NEWCOMB, ROBERT W; INTERNATIONAL FILTER SYMPOSIUM (KOJ1634); 12 MONTHS \$14,900

HARGER, ROBERT O; WORKSHOP IN OPTICAL COMMUNICATION SYSTEMS (KOJ2172); 12 MONTHS \$15,000

EPHREMIDES, ANTHONY; RESEARCH INITIATION - DETECTION AND ESTIMATION OF STOCHASTIC SIGNALS IN NOISE (KO11709); 18 MONTHS 115 900

### MASSACHUSETTS

### HARVARD UNIVERSITY

HO, YU-CHI; GENERALIZED CONTROL THEORY (Kodisti); 24 MONTHS \$54,200

### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

GOULD, LEONARD A; CONTROL OF LARGE SCALE AND DISTRIBUTED PARAMETER SYSTEMS (Kigstel 004): 12 MONTHS \$74,600

OPPENHEIM, ALAN V; DIGITAL PROCESSING OF SIGNALS (KGJ1354); 24 MONTHS \$69,000

NEVINS, JAMES L; ADVANCED AUTOMATION (KOJ4094): 12 MONTHS

### UNIVERSITY OF MASSACHUSETTS, AMHERST

MCINTOSH, R E: COMMUNICATION WITH HIGH SPEED TRAINS (ROJSOSI): 24 MONTHS \$35,600

HILL, F 8; ANALYSIS OF DIGITAL COMMUNICATION SYSTEMS (KOJ4756); 12 MONTHS \$29,900

### HARVARD UNIVERSITY-HARVARD MEDICAL SCHOOL

BURKE, JOHN F, AND STROKE, GEORGE W; WHITE-LIGHT 1-D MICROSCOPY PATTERN RECOGNITION (K025397 001); 12 MONTHS \$34,000

#### MICHIGAN

### MICHIGAN STATE UNIVERSITY

SIEGEL, MARVIN; RESEARCH INITIATION - ELECTROMAGNETIC PROBING IN ECOLOGICAL AND BIOLOGICAL MEDIA (KOSIESIS); 18 MONTHS \$16.000

### OAKLAND UNIVERSITY

FALKENBURG, DONALD R; RESEARCH INITIATION - OPTIMAL CONTROL OF THE HUMAN POPULATION (KOSTOS); 18 MONTHS \$15,000

### UNIVERSITY OF MICHIGAN

POWERS, W F; SINGULAR OPTIMIZATION PROBLEMS (KOJ0115); 24 MONTHS \$37,900

KAZDA, LOUIS F, AND ZADEH, LOTFI; WORKSHOP ON NEW DIRECTIONS IN SYSTEMS SCIENCE AND ENGINEERING - THEORY AND PRACTICE (KGJJJ≇); 12 MONTHS \$15,000.

LEITH, EMMETT N, AND UPATNIEKS, JURIS; INVESTIGATION OF COHERENT IMAGING SYSTEMS (KOJ1474); 24 MONTHS \$58,500

LEITH, EMMETT N, AND ANSLEY, DAVID A; RESOLUTION ENHANCE-MENT OF TRANSMISSION ELECTRON MICROGRAPHS (ROSI655); 24 MONTHS \$49,900

\*KHAN, PETER J; WAVEGUIDE SOLID STATE CIRCUIT DESIGN (KOJ\$370): 24 MONTHS \$30,000

### MINNESOTA

### UNIVERSITY OF MINNESOTA

VAN DER ZIEL, A; NOISE IN TYPE II SUPERCONDUCTORS (KOJAJOI); 12 MONTHS \$28,200

## UNIVERSITY OF MINNESOTA-INSTITUTE OF TECHNOLOGY

ROBBINS, WILLIAM P; RESEARCH INITIATION - FREQUENCY-SELEC-TIVE LIMITER USING PIEZOELECTRIC SURFACE WAVES (KOJJ690); 18 MONTHS \$16,000

### MISSISSIPPI

## UNIVERSITY OF MISSISSIPPI

WILTON, DONALD R; RESEARCH INITIATION - SOLUTION OF ELEC-TROMAGNETIC PROBLEMS INVOLVING PERFECTLY CONDUCTING OB-JECTS (K032011); 18 MONTHS \$15,200

### MISSOURI

### UNIVERSITY OF MISSOURI, ROLLA

TRACEY, JAMES H; INTERACTIVE DESIGN OF DIGITAL SYSTEMS (KOJ4076); 24 MONTHS \$58,900

### WASHINGTON UNIVERSITY

ZABORSZKY, JOHN; NONLINEAR CONTROL AND INFORMATION (K022903 001): 12 MONTHS \$50,600

CHANG, WILLIAM S.C. AND WEIL, RAOUL B; GUIDED WAVE DEVICES (KGJ1854); 24 MONTHS \$80,000

SNYDER, DONALD L; INFORMATION PROCESSING FOR DOUBLY-STOCHASTIC POISSON PROCESSES (KO32438); 24 MONTHS \$40,700

UBHAYA, VASANT A; RESEARCH INITIATION - ISOTONIC OPTIMIZA-TION (K032712): 18 MONTHS \$16,000

## NEBRASKA

## UNIVERSITY OF NEBRASKA AT LINCOLN

BAHAR, EZEKIEL; ELECTROMAGNETIC FIELDS IN INHOMOGENE-OUS MEDIA (KOS1074); 24 MONTHS \$42,000

### NEW YORK

### CLARKSON COLLEGE OF TECHNOLOGY

PERREAULT, DAVID A: DECOUPLING REAL NONLINEAR FUNC-TIONAL EQUATIONS (KOJ2542): 12 MONTHS \$27,000

### **COLUMBIA UNIVERSITY**

WING, OMAR; DISTRIBUTED PARAMETER NETWORK (KOJ1462 X00); 12 MONTHS \$41,000

LIN, JIGUAN; RESEARCH INITIATION - COOPERATIVE CONTROL OF DYNAMIC SYSTEMS (K032701); 18 MONTHS \$16,000

### CORNELL UNIVERSITY

FINE, TERRENCE L; PATTERN CLASSIFICATION AND PREDICTION (KO16034 X01); 12 MONTHS \$20,000

CARLIN, H J, AND KU, W H; APPLICATION OF BROADBAND TECHNIQUES TO CIRCUIT DESIGN (KOJIGIZ XOO); 12 MONTHS \$60,100

BERGER, TOBY; RATE DISTORTION THEORY FOR SOURCES WITH MEMORY (Kosteto); 24 MONTHS \$95,600

MEMMALISER, GEORGE; OPTIMAL SET COVERING (KOSSESS X00°); 12
MONTHS \$10,500



TANG. C L. AND BALLANTYNE, JOSEPH M; BULK AND INTEGRATED NONLINEAR AND ACTIVE OPTICAL DEVICES (Kosses); 24 MONTHS \$120,600

### INSTITUTE OF ELECTRICAL & ELECTRONIC ENGRS INC

SODERMAN, ROBERT A: 1978 CONFERENCE ON PRECISION ELEC-TROMAGNETIC MEASUREMENTS (KOSISOO); 18 MONTHS \$2,000

#### NEW YORK UNIVERSITY

HERBACH, LEON; AVAILABILITY AND RELIABILITY OF COMPLEX EQUIPMENT (KOS1858); 24 MONTHS \$66,900

### POLYTECHNIC INSTITUTE OF REGOKLYN

FELSEN, LEOPOLD B; DIFFRACTION IN WAVEGUIDES AND RESONA-TORS (K0109)7 001); 28 MONTHS \$61,400

SCHWARTZ, MISCHA, AND BOORSTYN, ROBERT R; DIGITAL TECHNIQUES IN SIGNAL PROCESSING (KOSI 169): 24 MONTHS \$70,000

SCHWARTZ, MISCHA; DIGITAL TECHNIQUES IN SIGNAL PROCESSING (Kos1466 001); \$10,200

SILBER, LEO M; IMPROVED MICROWAVE DEVICES (KOJISJE); 24 MONTHS \$60,000

BONGIORNO, JOSEPH J JR. AND YOULA, DANTE C; THE DESIGN OF CONTROL SYSTEMS FOR LINEAR TIME-INVARIANT MULTIVARIABLE PROCESSES (Kostess); 24 MONTHS \$80,500

MATTHEWS, JAMES W: RESEARCH INITIATION - SHAPING FM POWER SPECTRA THROUGH DISPERSAL TECHNIQUES (Kosteen), 18 MONTHS \$18,000

CASSARA, FRANK A: RESEARCH INITIATION - INTERNCHANNEL IN. TERFERENCE IN FM THRESHOLD EXTENSION RECEIVERS (KOSE689); 18 MONTHS \$16,000

ADAMOWICZ, MICHAEL; RESEARCH INITIATION . CONSTRAINED CLUSTERING PROBLEMS (KOJETIE); 18 MONTHS \$16,000

DRENICK, R.F., AND DORATO, P; CONTROL OF LINEAR POLYSYSTEMS (KOJ (178); 12 MONTHS \$26,500

TAMIR, THEODOR, AND BERTONI, HENRY L: ELASTIC-WAVE BEAM PROPAGATION AND SCATTERING (KOJ4728): 24 MONTHS \$75,200

### RENSBELATE POLYTECHNIC INSTITUTE

TIERSTEN, HARRY F; ELECTROMAGNETIC EFFECTS IN DEFORMA. BLE SOLID CONTINUA (KOI1185 001); 12 MONTHS \$26,800

CHANDHI, SORAB K; ELECTRONIC FUNCTION SYNTHESIS (KOLLISE X00); 12 MONTHS \$23,500

DICESARE, PRANK; RESEARCH INITIATION . MODELLING THE DYNAMIC-RESIDENTIAL GROWTH OF AN URBAN AREA (KOS2698); 18 MONTHS \$16,000

### ROCHESTER INSTITUTE OF TECHNOLOGY

RHODY, HARVEY E; RESEARCH INITIATION . SPEECH COMPRES. SION BY SEGMENT CODING (KOSSTOT); 18 MONTHS \$19,800

### STATE UNIVERSITY AT BUFFALO

SCOTT, PETER D; RESEARCH INITIATION - OPTIMAL CHEBYSHEY REGULATION (KOJ8705); 18 MONTHS \$16,000

### STATE UNIVERSITY AT STONY BROOK

CHANG, SHELDON S L; MULTISTAGE DECISION PROCESSES USING FUZZY DYNAMIC PROGRAMMING (KO16017 001); 12 MONTHS \$10,100

DUNCAN, TYRONE E; STOCHASTIC PROBLEMS IN COMMUNICATION AND CONTROL (KOJIIII); 12 MONTHS \$15,400

STROKE, GEORGE W; FUNDAMENTAL STUDIES IN ENGINEERING OP-TICS (Kasseto X00); 18 MONTHS \$67,500

### SYRACUSE UNIVERSITY

HARRINGTON, ROGER F; MATRIX METHODS FOR ELECTROMAG-NETIC FIELD COMPUTATIONS (KOOLERT 002): 24 MONTHS \$52,000

RUDOLPH, LUTHER D; SEQUENTIAL CODE REDUCTION (KOJISIS); 24 MONTHS \$60,000

## UNITED ENGINEERING TRUSTEES

PRESTON, KENDALL JR, AND FU, K S; CONFERENCE ON PATTERN INFORMATION PROCESSING (Kojisss); 12 MONTHS \$16,000

PRESTON, KENDALL JR; CONFERENCE ON AUTOMATIC CYTOLOGY (KOJJ7J7); 12 MONTHS \$6,900

### UNIVERSITY OF ROCHESTER

STREIFER, WILLIAM; GUIDANCE AND GENERATION OF OPTICAL RADIATION (KOS1038); 12 MONTHS \$34,200

### NEW YORK UNIVERSITY-UNIVERSITY HEIGHTS CENTER

RUDD, MICHAEL J; RESEARCH INITIATION - ACOUSTIC DOPPLER RADAR (Kosteso); 18 MONTHS \$15,000

## POLYTECHNIC INSTITUTE OF BROOKLYN-GRADUATE CENTER

OLINER, ARTHUR A: ACOUSTIC SURFACE WAVEGUIDES (KOSJODA): 12 MONTHS \$45,000

### **NORTH CAROUNA**

## NORTH CAROLINA STATE UNIVERSITY AT RALEIGH

ELMAGRRABY, SALAH E; THEORY OF SCHEDULING AND ACTIVITY NETWORKS (Kosesus); 24 MONTHS 451,000

### CASE WESTERN RESERVE UNIVERSITY

BLANKENSHIP, GILMER L; RESEARCH INITIATION - ESTIMATION IN NONLINEAR STATE SPACE (KOJ2700); 15 MONTHS \$16,000 SHAPIRO, JEFFREY H: SPATIAL COMMUNICATION THEORY FOR THE TURBULENT ATMOSPHERE (KOSSSIE): 24 MONTHS \$56,100

#### OHIO STATE UNIVERSITY

GARBACZ, ROBERT J; CHARACTERISTIC MODE THEORY APPLIED TO ANTENNA ARRAYS (KOLJOJO): 18 MONTHS \$36,300

PEAKE, WILLIAM H: RADIOMETER ANTENNAS (KOJSTA): 12 MONTHS \$45,800

RUDDUCK, ROGER C: INVESTIGATION OF APERTURE NEAR FIELD PHENOMENA (Kossess): 12 MONTHS \$23,000

#### OKLAHOMA

### OKLAHOMA STATE UNIVERSITY

HADY, M ABDEL; REMOTE SENSING APPLICATIONS TO AGRICUL-TURE AND REGIONAL DEVELOPMENT PROJECTS (FOJI664°): 12 MONTHS \$2,520

HADY, M ABDEL, AND MUSTAFA, HASAN; APPLICATIONS OF MODERN AIRBORNE REMOTE SENSING AND AERIAL RECONNAIS. SANCE TECHNIQUES TO AGRICULTURE AND REGIONAL DEVELOP. MENT (FOJIAGE 001"); 12 MONTHS \$3,000

MULHOLLAND, R J; EXPONENTIAL REPRESENTATIONS OF LINEAR PHYSICAL SYSTEMS (KONJOSI); 24 MONTHS 834,600

### UNIVERSITY OF THISA

BEDNAR, J BEE; TWO-DIMENSIONAL RECURSIVE DIGITAL FILTERS (KOJ1763): 12 MONTHS \$25,600

### OREGON

### OREGON STATE UNIVERSITY

MOHLER, RONALD R; BILINEAR CONTROL PROCESSES (KOJJEJS); 12 MONTHS \$11,000

#### PENNSYLVANIA

#### CARNEGIE-MELLON UNIVERSITY

LEE, SING H, AND JORDAN, A G: ALL-OPTICAL ANALOG COMPUTA-TION (Kosisoi); 24 MONTHS \$47,000

LEE, SING H; ALL-OPTICAL ANALOG COMPUTATION (KOS1801 001); 12 MANTHS \$3 800

KORTANEX, KENNETH O; NUMERICAL ASPECTS OF POLLUTION

ABATEMENT (KOSISIS); 24 MONTHS \$20,100
REICHERT, T A; INFORMATION STORED IN SHORE CODE SEQUENCES (KOJJ7JJ); 24 MONTHS \$45,500

### UNIVERSITY OF PITTSBURGH

VOGT, WILLIAM G. AND MICKLE, MARLIN H; OPTIMAL ESTIMATION AND CONTROL OF DYNAMIC SYSTEMS (Kaseest), 24 MONTHS \$60,000

### RHODE ISLAND

## **BROWN UNIVERSITY**

LASALLE, J P. AND KUSHNER, H J; THEORY OF SYSTEMS WITH EMPHASIS ON COMPUTATIONAL PROBLEMS (KOJIOTA X00°); 12 MONTHS \$35,000

BOLLE, DONALD M; THEORETICAL AND NUMERICAL INVESTIGA-TION OF MICROWAVE AND MILLIMETER WAVE COMPONENT STRUC-TURES (KOJ1591); 24 MONTHS \$78,900

### UNIVERSITY OF RHODE ISLAND

MOFFETT, MARK B; RESEARCH INITIATION - PARAMETRIC SOURCES OF TRANSIENT SIGNALS (KOJEGE): 18 MONTHS \$19,700

### TENNESSEE

### VANDERBILT UNIVERSITY

WELLS, FRANCIS M; RESEARCH INITIATION . DISCONTINUOUS CON-TROL OF ELECTRIC SPACE CONDITIONING PROCESSES (KOSE708); 18 MONTHS \$16,000

### TEXAS

### RICE UNIVERSITY

KIM, DAE M, TITTLE, FRANK K, AND RABSON, THOMAS A; COHERENT OPTICAL DEVICES FOR COMMUNICATIONS (KOSSES); 24 MONTHS \$40,000

## SOUTHERN METHODIST UNIVERSITY

SAGE, ANDREW P; SYSTEM IDENTIFICATION IN LARGE SCALE SYSTEMS (Kossald); 12 Months \$35,200

### TEXAS TECH UNIVERSITY

LIBERTY, STANLEY R: RESEARCH INITIATION . STOCHASTIC LINEAR REGULATION (Koseros); 18 MONTHS \$16,000

AGGARWAL, J K; REAL-TIME VISUAL RECOGNITION BY DIGITAL COMPUTER (KOJESIS XOOF); 12 MONTHS \$12,500



UNIVERSITY OF HOUSTON

ANDERSON, WALLACE L: OFFICAL PATTERN RECOGNITION (KM141); 24 MONTHS \$49,600

SHEN, LIANG-CHI; YAGI ARRAY OF DIPOLES AND YAGI ARRAY OF LOOPS (KOSEISI); EL MONTHS \$41,600

#### VIRGINIA

UNIVERSITY OF VIRGINIA

MCVEY, EUGENE 8, AND PARRISH, EDWARD A: IMAGE PROCESSING FOR AUTOMATION (ROSSING): 24 MONTHS 292,100

#### WASHINGTON

UNIVERSITY OF WASHINGTON

HARRIS, JAY H; OPTICAL THIN FILM TECHNIQUES (KOIGHIP 001); 12 MONTHS \$30,400

### WISCONSIN

UNIVERSITY OF WISCONSIN, MADISON

NORDMAN, J.E., PARMENTIER, R.D., AND SCOTT, A.C.; SUPERCONDUC-TIVE INFORMATION PROCESSING SYSTEMS (KG18308 002); 18 MONTHS \$40,000

REDINBO, G ROBERT; RESEARCH INITIATION - OPTIMUM BLOCK AND CONVOLUTIONAL CODES (KOSS706): 18 MONTHS \$16,000

KIME, C R; DIAGNOSTIC SYSTEMS FOR DIGITAL NETWORKS (KOJSOJT); 24 MONTHS \$49,000

UNIVERSITY OF WISCONSIN, MILWAUKES

DAVIDA, GEORGE 1; RESEARCH INITIATION - CODING OF GRAPHS (KOISTOS): 18 MONTHS \$16,000

## SPECIAL ENGINEERING PROJECTS

### CAUFORNIA

UNIVERSITY OF CALIFORNIA, BERKELEY

BAKRISON, D J; STUDY OF THE HUMAN VISUAL SYSTEM (KOJI482); 12 MONTHS \$30,000

LEWIS, E B; THEORETICAL AND EXPERIMENTAL STUDY IN NEU-ROPHYSIOLOGY (Kostur); 12 MONTHS \$29,800

University of California, Los Angeles

LYMAN, JOHN; REFLEX CONTROL FOR ARTIFICIAL LIMBS (KOJ2790); 12 MONTHS \$36,200

UNIVERSITY OF CALIFORNIA, SAN DIEGO

2WEIFACH, B W, AND FUNG, Y C, FLOW AND EXCHANGE IN SMALL BLOOD VESSELS (KOSIIC XCO); 30 MONTHS \$30,000

### DISTRICT OF COLUMBIA

AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES

OLIVE, JOHN R: INTERNATIONAL WORKSHOP SERIES ON BIOMEDI-CAL ENGINEERING (K022393 X01): 18 MONTHS \$95,600

NATIONAL ACADEMY OF ENGINEERING

BINNS, & B: APPLICATION OF TECHNOLOGY TO IMPROVE PRODUC-TIVITY IN THE SERVICE SECTOR OF THE NATIONAL ECONOMY (C410249); 12 MONTHS \$29,000

NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL

CLIFFE, ROBERT A; PUBLICATION AND DISTRIBUTION OF THE PROCEEDINGS OF THE THIRTEENTH GENERAL CONGRESS OF THE INSTITUTE OF REFRIGERATION (CS10305 001°); \$8,200

### RORIDA

FLORIDA TECHNOLOGICAL UNIVERSITY

WANIELISTA, MARTIN P: RESEARCH INITIATION - OPERATING MODELS FOR WATER TREATMENT PLANTS (KGS4632); 18 MONTHS \$16,000

UNIVERSITY OF FLORIDA

HUBER, WAYNE C, AND HEANEY, JAMES P; DATA ACQUISITION AND MANAGEMENT FOR WATER QUALITY CONTROL (KOGGA), 12 MONTHS \$40,300

UNIVERSITY OF FLORIDA-BNGINEERING & INDUSTRIAL BXPSRIMENT STATION

PYATT, E E; METHODOLOGY FOR RATIONAL FLOODPLAIN MANAGE. MENT (KOSOSE): 12 MONTHS \$5,600

### GEORGIA

GEORGIA INSTITUTE OF TECHNOLOGY

STRAHLE, WARREN C; COMBUSTION GENERATED NOISE (K032544); 24 MONTHS \$27,900

NUNNALLY, HUEY N; RESEARCH INITIATION - ELECTRICAL STIMU-LATION OF THE PERIPHERAL AUDITORY SYSTEM (K032654); [8 MONTHS \$16,000

### HAWAII

UNIVERSITY OF HAWAII

WATANABE, MICHAEL S; 1914 HAWAII INTERNATIONAL CON-FERENCE ON SYSTEM SCIENCES (HICSS-5) (KOS1868); 12 MONTHS \$5,400

#### INDIANA

PURDUE UNIVERSITY

CROCKER, MALCOLM J; CONTROLLING THE NOISE RADIATED FROM DIESEL ENGINES (KOSTOLL); 24 MONTHS \$45,800

UNIVERSITY OF NOTRE DAME

SHARPE, DAVID R; RESEARCH INITIATION - DIGITAL ANALYSIS AND CATEGORIZATION OF ELECTROENCEPHALOGRAMS (KOS2694); 18 MONTHS \$16,000

### LOUISIANA

TULANE UNIVERSITY-SCHOOL OF MEDICINE

LIU. Y KING: THE STRUCTURAL BIOMECHANICS OF THE HUMAN SPINE (KOSPOLY): 24 MONTHS \$79,900

### MASSACHUSETTS

MASSACHUBETTS INSTITUTE OF TECHNOLOGY

MANN, ROBERT W; ELECTROMYOGRAPHIC ACTIVATED PROSTHESIS (KOJ140), 24 MONTHS \$60,000

EDEN, MURRAY; PATTERN RECOGNITION OF CONVENTIONAL SYMBOL SYSTEMS (KOJ1736 X00); 12 MONTHS \$11,000

MASSACHUSETTS SCIENCE & TECHNOLOGY FOUNDATION

BARTON, ROBERT S; FECHNOLOGY EXCHANGE (1000018 001°); 12 MONTHS \$30,000

### **MICHIGAN**

MICHIGAN STATE UNIVERSITY

HATFIELD, FRANK J; RESEARCH INITIATION - SIMULATION OF TRAFFIC FLOW TO MINIMIZE INDIVIDUAL TIME (KOJIGII): 18 MONTHS \$16,000

WAYNE STATE UNIVERSITY

SINCH, TRILOCHAN; RESEARCH INITIATION - EFFECT OF AMBIENT AEROSOL CONCENTRATIONS ON PARTICULATE EMISSION FROM SPARK IGNITION ENGINES (KOJASA); 18 MONTHS \$16,000

### **NEW MEXICO**

UNIVERSITY OF NEW MEXICO

HOUGHTON, ARTHUR V; ELEVENTH ANNUAL CONFERENCE ON THERMAL CONDUCTIVITY (KOSOSS): 12 MONTHS \$3,300

### **NEW YORK**

AMERICAN INSTITUTE OF PHYSICS

JOHNSON, JOHN C: CONFERENCE ON ACOUSTICS AND SOCIETAL PROBLEMS (KOJOJSJ); 24 MONTHS \$30,000

NEW YORK UNIVERSITY

ARNOLD, LEE, SLUTSKY, SIMON, RUDD, MICHAEL J, AND THUMIM, ALFRED: PREDICTION OF URBAN NOISE DUE TO MOVING OR STATIONARY SOURCES (KOJIOT): 12 KONTHS 876,700

POLYTECHNIC INSTITUTE OF BROOKLYN

PAPOULIS, ATHANASIOS; SIONAL ANALYSIS IN HEART X-RAYS (Kasioss); 12 MONTHS \$29,900

RICHMOND COLLEGE

WINKLER, LEONARD P; RESEARCH INITIATION - ADAPTIVE DIGITAL PROCESSING TECHNIQUES FOR HIGHWAY TRANSPORTATION SYSTEMS (KOJEGE); 18 MONTHS \$14,900

ROCHESTER INSTITUTE OF TECHNOLOGY

LEE, ROBERT E; LATENCY TO DILATION IN THE HUMAN VISI A. SYSTEM (KOOLIS) 001): \$4,700

STATE UNIVERSITY AT BUFFALO

MATES, ROBERT E; MODELING OF THE CARDIOVASCULAR SYSTEM (KOJI903); 24 MONTHS \$51,400

STATE UNIVERSITY AT STONY BROOK

STROKE, GEORGE W, PELLEGRINO, EDMUND D, GABOR, DENNIS, GOLDMARK, PETER C, AND BAUER, BEN; SONO.RADIOGRAPHY [KO18302 001); 18 MONTHS \$150,000

UNIVERSITY OF ROCHESTER

DUNN, H SEARL; AUTOMOTIVE PROPULSION SYSTEM (KOJOOSE); 12 MONTHS \$31,500

DUNN, H SEARL; AUTOMOTIVE PROPULSION SYSTEM (K030096 001); \$10,100



#### **NORTH CAROUNA**

NORTH CAROLINA STATE UNIVERSITY AT RALEIGH

EL-SHIEKH, ALY H; SNAG BEHAVIOR OF KNIT FABRIC (KOJZOIZ); 24 MONTHS \$60,200

#### OHO

OHIO STATE UNIVERSITY

NEREM, ROBERT M: FLUID MECHANICS PROBLEMS IN ARTERIAL DISEASE (KOSIO28): 24 MONTHS 875.700

### OKIAHOMA

UNIVERSITY OF OKLAHOMA

HOAG, LAVERNE L; RESEARCH INITIATION - THE ROLE OF PSYCHOLOGICAL STRESS IN JOB SELECTION AND SATISFACTION (KGJ4643); 18 MONTHS \$16,000

### **PENNSYLVANIA**

CARNEGIE-MELLON UNIVERSITY

HUNG, TIN-KAN; BLOOD FLOW PAST AORTIC HEART VALVES (KOSISIA); 24 MONTHS \$40,000

DREXEL UNIVERSITY

KLAFTER, RICHARD D; RESEARCH INITIATION - AN OPTIMALLY ENERGIZED CARDIAC PACEMAKER (KOJSSI): 18 MONTHS \$20,000

PENNSYLVANIA STATE UNIVERSITY

MCCARTHY, GREGORY J; WORKSHOP ON GLASS RESEARCH FOR THE CONTAINER INDUSTRY (KOJ1373); 6 MONTHS \$1,500

TICHY, JIRI; SOUND POWER MEASUREMENTS IN REVERBERATION CHAMBERS (KOJ1783); 24 MONTHS \$62,100

REETHOP, GERHARD, ACOUSTICALLY ABSORBENT MATERIALS (Kaseses); 12 Months \$54,200

UNIVERSITY OF PENNSYLVANIA

BOCKRIS, JOHN O'M, AND BUCK, ERWIN; ELECTROCHEMICAL ELECTRICITY STORERS (KO16550 001): 12 MONTHS \$49,000

CARNEGIE-MELLON UNIVERSITY-CARNEGIE INSTITUTE OF TECHNOLOGY

TOLLE, JOHN E; SENSITIVITY AND STABILITY IN TRAFFIC STREAM MOVEMENT (KOJ4431); 18 MONTHS \$16,000

#### TEXAS

TEXAS TECH UNIVERSITY

DUDEK, R A, AND SMITH, M L; SEQUENCING RESEARCH (K002889 001); 24 MONTHS \$50,000

UNIV OF TEXAS AT ARLINGTON

POTVIN, ALFRED R; RESEARCH INITIATION - DYNAMIC ANALYSIS OF NORMAL AND PATHOLOGICAL MOTOR CONTROL (KOJIBJO); 18 MONTHS \$16,000

UNIV OF TEXAS AT AUSTIN

POPOVICH, ROBERT P, RESEARCH INITIATION - MASS TRANSFER IN THE ARTIFICIAL KIDNEY SYSTEM (KOJZBJI), 18 MONTHS \$16,000

HILLERY, HERBERT V: ACOUSTIC PROPAGATION IN BRANCHED SOLIDS (KO34347); 12 MONTHS \$49,500

CLARK, LYLE G, AND DICKERSON, J R; TRAFFIC STABILITY AND SENSITIVITY (KOSSIS): 24 MONTHS \$40,000

UNIVERSITY OF HOUSTON

SPENCER, DON L; RESEARCH INITIATION - EFFECTS OF TWO CLASSICAL ASSUMPTIONS ON SEQUENCING/SCHEDULING MAKESPAN (KO32632); 18 MONTHS \$15,000

### VIRGINIA

UNIVERSITY OF VIRGINIA

DEMETSKY, MICHAEL J, RESEARCH INITIATION - THE UTILIZATION OF URBAN PASSENGER TRANSIT SYSTEMS FOR COMMODITY TRANSPORT (KOJJOJE): 18 MONTHS \$16,000

VIRGINIA POLYTECHNIC INSTITUTE

YU, JASON C, AND WILHELM, WILBERT E JR; AIR TERMINAL OPERA-TION SYSTEMS BY GASP SIMULATION (KOJOJIS); 24 MONTHS \$76,400

### WASHINGTON

UNIVERSITY OF WASHINGTON-SCHOOL OF MEDICINE

GUY. ARTHUR W; MICROWAVE INTERACTION WITH AUDITORY SYSTEMS (KOS4750); 12 MONTHS \$42,000

BATTELLE MEMORIAL INSTITUTE-BATTELLE NORTHWEST

SIKOV. MELVIN R, AND REID, JOHN M; WORKSHOP ON INTERACTION OF ULTRASOUND AND BIOLOGICAL TISSUES (K030871): 12 MONTHS \$15,000

### WISCONSIN

MARQUETTE UNIVERSITY

SANCES, ANTHONY JR; WORKSHOP ON THE EFFECTS OF MAGNETIC FIELDS ON COMMUNICATION PROCESSES (KGJESES); 12 MONTHS \$15,000 UNIVERSITY OF WISCONSIN, MADISON

ROBINSON, GORDON H; AUTOMOBILE DRIVER CONTROL- ACCIDENT CAUSATION FACTORS (KOJ1/JJ): 24 MONTHS \$33,200

# ATMOSPHERIC SCIENCES AND EARTH SCIENCES

## ATMOSPHERIC SCIENCES

#### ALASKA

UNIVERSITY OF ALASKA

HESSLER, V P, AND HEACOCK, R R; FINNISH · ALASKAN MICROPUL-SATION STUDIES (A014:80); 12 MONTHS \$18,600

UNIVERSITY OF ALASKA-GEOPHYSICAL INSTITUTE

WESCOTT, EUGENE M, AND MURRAY, WALLACE B; FIELD LINE TRACING WITH BARIUM IONS (A019265 002); 12 MONTHS \$40,400 SHERIDAN, ROGER; HYDROGEN ATOM EXCITATION DURING IMPACT

ON ATMOSPHERIC GASES (AGESES SO); 12 MONTHS \$50,600
BATES, HOWARD F; INCOHERENT SCATTER STUDIES IN THE AU-

RORAL ZONE (A027840 001); 8 MONTHS \$51,200

WENDLER, GERD; ICE, WATER AND HEAT BALANCE OF THE MC-CALL GLACIER, BROGKS RANGE, ALASKA (A028278 X01); 12 MONTHS \$118,900

SWIFT, DANIEL W; MAGNETIC STORM AND POLAR SUBSTORM PHENOMENA (A020158 X01); 12 MONTHS \$44,800

WILSON, CHARLES R; AURORAL INFRASONIC WAVES (A029541 X01); 12 MONTHS \$71,400

OHTAKE, TAKESHI, AND JAYAWEERA, KOLF; FALL VELOCITIES OF SOLID HYDROMETEORS (A0J1867); 24 MONTHS \$87,800

AKASOFU, AYUN-ICHI; THE NORTH-SOUTH CHAIN OF GEOPHYSICAL

STATIONS IN ALASKA (A01/700); 12 MONTHS \$25,500

ROMICK, GERALD J: PARTICLE PRECIPITATION AND THE TER-

RESTRIAL ATMOSPHERE (AGG1876 XGG), 12 MONTHS \$92,600
BELON, ALBERT E, OPTICAL OBSERVATIONS OF THE AURORAS

WITH HIGH SPECTRAL AND SPATIAL RESOLUTION (ACMITS); 12
MONTHS \$20,100
HEACOCK, RICHARD R; RELATION OF MICROPULSATIONS TO THE
PLASMASPHERE, PLASMA TROUGH, AND PLASMA SHEET REGIONS

(A0J2J90): 12 MONTHS \$27,100
HEACOCK, RICHARD R: RELATIONS OF MICROPULSATIONS TO THE
PLASMASPHERE, PLASMA TROUGH, AND PLASMA SHEET REGIONS
(A0JJJ90 001): 12 MONTHS \$3,500

(A03390 001); 12 MONTHS \$3,500 DEGEN, VLADIMIR; VIBRATIONAL ENHANCEMENT OF NITROGEN EMISSION IN THE QUIET HYDROGEN ARC (A031500); 12 MONTHS \$39,300 BROWN, NEAL B; SUPPORT OF POKER FLAT RESEARCH FACILITY

THROUGH FISCAL YEAR 1972 (A032521); 12 MONTHS \$100,000
BROWN. NEAL B: SUPPORT OF POKER FLAT RESEARCH FACILITY
(A032531 001): \$28,000

ONWUMECHILLI, A, AND AKASOFU, S-1; RELATIONSHIPS BETWEEN THE AURORAL AND EQUATORIAL ELECTROJETS (A034918): 12 MONTHS \$22.400

JAYAWEERA, K O L F, AND OHTAKE, TAKESHI; FIELD EXPERIMENTS AT MCCALL GLACIER TO DETERMINE THE GROWTH RATE, GROWTH MODE AND BULK DENSITY OF COLUMNAR ICE CRYSTALS (A03J389); 12 MONTHS \$40,000

### ARIZONA

LOWELL OBSERVATORY

HALL, JOHN S; SOLAR VARIATION AND ATMOSPHERIC TRANS-PARENCY PROGRAM (A030687 X00); 12 MONTHS \$50,200

UNIVERSITY OF ARIZON.

DAWSON, GRORGE A; CHARGING OF UNCHARGED WATER DROPS IN ELECTRIC FIELDS (A027351 001); \$19,800 REAGAN, JOHN A, AND HERMAN, BENJAMIN M; 1-IDAR AND SOLAR

REAGJN. JOHN A. AND HERMAN, BENJAMIN M; I-IDAR AND SOLAR RADION ETER STUDIES OF ATMOSPHERIC AEROSOLS (A011918 X00); 12 MONTHS \$81,500

LAMARCHE, VALMORE C JR; DENSITOMETRIC ANALYSIS OF ANNUAL RINGS OF TREES- A NEW PALEOCLIMATIC TOOL (A03J859); 24 MONTH3 \$53,000

GEHRELE A M J TOM; PROJECT POLARISCOPE (PO28204 001°); 12 MONTHS \$20 000

### CALIFORNIA

ABROSPACE CORPORATION

MCPHERSON. DONALD A: SATELLITE INVESTIGATION IN THE HIGH LATITUDE OUTER MAGNETOSPHERE (A033284): 12 MONTHS \$41,600



ALIFORNIA INSTITUTE OF TECHNOLOGY

ZIRIN, HAROLD, RESEARCH IN THE CIRCULATION OF THE SOLAR TMOSPHERE (A014015 001); 12 MONTHS \$17,200

ZIRIN, HAROLD, RESEARCH IN CIRCULATION OF THE SOLAR AT-IOSPHERE (A024015 002); 2 MONTHS \$11,300

ALIFORNIA STATE UNIVERSITY, SAN JOSE

LESTER. PETER F: TURBULENCE ZONES IN THE LOWER TROPO-PHERE IN THE LEE OF MOUNTAINS (ACCIDED); 12 MONTHS \$23,700

ACRAMENTO CITY COLLEGE

VORPAHL, JOAN; THE IMPULSIVE PHASE OF FLARES (A031587); 12 IONTHS \$11,200

VORPAHL, JOAN; THE IMPULSIVE PHASE OF FLARES (ACJISET COI); 1.600

### TANFORD RESEARCH INSTITUTE

BATES, HOWARD F; RADAR LOCATION OF THE AURORAL BELT ROM THE NORTHERN MAGNETIC POLE (ACLESSES 001); \$18,500 BATES, HOWARD F, AND HODGES, JAMES C; A PROPOSAL TO

PERATE THE NORTHERN POLAR AURORAL RADAR IN 1971-74 (A016269 OJ): 18 MONTHS \$53,300

UTHE, EDWARD E; LIDAR OBSERVATIONS IN ST. LOUIS (ACIOLIS); 6 CONTHS \$24,000

SMITH, FELIX T. AND OLSON, RONALD E: COLLISION SPECTROSCOPY N DIATOMIC SYSTEMS (A051418); 24 MONTHS \$98,600

HAKE, RICHARD DJR, AND VIEZEE, WILLIAM, MIDDLE AND UPPER ATMOSPHERIC PROBING WITH A TUNABLE LIDAR (A031476); 12 **40NTHS \$49,700** 

#### ITANFORD UNIVERSITY

DA ROSA, ALDO V: COLLECTION AND ANALYSIS OF IONOSPHERIC FLECTRON CONTENT DATA (A014101 001); 12 KONTHS \$80,700

DA ROSA, A V: STUDY OF IONOSPHERIC STORMS (A028477 001): 12 40NTHS \$49,000

STREET, ROBERT L. AND HSU, EN YUN: TRANSPORT PROCESSES (CROSS AN AIR-WATER INTERFACE (A028670 X01); 12 MONTHS \$52,200

CROFT, THOMAS A: REDUCTION AND ANALYSIS OF SOLAR WIND WEASUREMENTS (A030351); 12 MONTHS \$36,300 WILCOX, JOHN M; DYNAMIC OBSERVATIONS OF SOLAR MAGNETIC

AND VELOCITY FIELDS (A031138); 12 MONTHS \$60,000 CROFT, THOMAS A: ANALYSIS OF INTERPLANETARY SCINTILLATION

(A032385); 12 MONTHS \$59,700

HELLIWELL, R A: VERY LOW FREQUENCY MAGNETOSI HERIC STU-DIES (A032590 X00); 12 MONTHS \$100,100

BRACEWELL, R N; MICROWAVE SPECTROHELIOGRAMS (A033000); 12 MONTHS \$71,000

WATERMAN ALAN T JR: ATMOSPHERIC PROBING USING WAVE PROPAGATION MEASUREMENTS (A033183); 12 MONTHS \$70,000

UNIVERSITY OF CALIFORNIA, BERKELEY

MOZER, FORREST; WORLDWIDE ELECTRIC FIELD MEASUREMENTS ON BALLOONS (A033112 X00); 12 MONTHS \$78,500

UNIVERSITY OF CALIFORNIA. LOS ANGELES

SEKERA, ZDENEK, AND RAO, C R NAGARAJA; INVESTIGATIONS OF ATMOSPHERIC RADIATIVE TRANSFER AND OPTICAL PHENOMENA (A016617 001); 24 MONTHS \$95,700

BUSSE, FRIEDRICH H; ATMOSPHERIC FLUID DYNAMICS (A031447): 12 MONTHS \$107.600

SISCOE, GEORGE; SOLAR WIND STRUCTURE RESEARCH (AQUELL X00); 12 MONTHS \$50,300

PRUPPACHER, HANS R; A WIND TUNNEL INVESTIGATION OF MICROPHYSICAL PROCESSES IN ATMOSPHERIC CLOUDS AT TEM-PERATURES ABOVE AND BELOW O DEGREES C (A034814 X00), 12 MONTHS \$53,400

WURTELE, G; ATMOSPHERIC THERMAL VORTICES MORTON (A033437); 12 MONTHS \$17,100

KENNEL, CHARLES F; MAGNETIC STORMS (A014148 X00): 12 MONTHS £114.900

UNIVERSITY OF CALIFORNIA, SAN DIEGO

BOOKER, HENRY G, AND RUMSEY, VICTOR H: RADIOWAVE DIAG-NOSTIC STUDIES OF THE EARTH'S PLASMA ENVIRONMENT (A02059) 001); 12 MONTHS \$127,100

SUESS, HANS E; SOLAR RELATED SECULAR VARIATION OF THE AT-

MOSPHERIC CARBON-14 LEVEL (A021161 001); 3 MONTHS \$3,800 DOUPNIK, JOE R, BANKS, PETER M, AND AXFORD, W IAN; BEHAVIOR OF THERMAL PLASMA IN THE IONOSPHERE AND MAGNETOSPHERE (A016451); 12 MONTHS \$36,700

FEJER, JULES A, BOOKER, HENRY G, AND LEWAK, GEORGE J; ROLE F PLASMA INSTABILITIES IN IONOSPHERIC MODIFICATION BY

RADIO WAVES (A030628); 12 MONTHS \$45,000 DOUPNIK, JOE R: THE FORMATION AND DYNAMICS OF THE PLASMA-SPHERE AND PLASMAPAUSE (A033434); 12 MONTHS \$38,300

UNIVERSITY OF CALIFORNIA, SAN DIEGO-SCRIPPS INSTITUTION OF OCEANOGRAPHY

KEELING, CHARLES D; THE ABUNDANCE OF CARBON DIOXIDE IN THE ATMOSPHERE AND ITS EXCHANGE WITH THE OCEANS (ACHIEF) X00°); 12 MONTHS \$156,900

GIBSON, CARL H: TURBULENT MIXING OF SCALAR FLUID PROPER-TIES (A031439); 12 MONTHS \$39,400

LOCKHEED AIRCRAFT CORPORATION-LOCKHEED RESEARCH LABORATORY

JOHNSON, RICHARD G; CONTRACT FOR ANALYSIS OF SATELLITE DATA ON ENERGETIC AURORAL HELIUM IONS (C079000); 24 MONTHS \$48,863

### COLORADO

COLORADO STATÉ UNIVERSITY

RASMUSSEN, JAMES L; HYDROMETEOROLOGICAL RESEARCH (A029147 001); 12 MONTHS \$37,800

UNIVERSITY OF COLORADO

REES, MANFRED H, AND RENSE, WILLIAM A: THEORETICAL PHYSICS OF THE UPPER ATMOSPHERE (A016200 001); 24 MONTHS \$101,800

LONDON, JULIUS: THE DISTRIBUTION OF OZONE AND THE ENER-GETICS OF THE ATMOSPHERE (A028688 X01); 12 MONTHS \$45,400

HAAS, J EUGENE: USER NEEDS AND DISSEMINATION REQUIRE-MENTS FOR ATMOSPHERIC INFORMATION (A031498); 12 MONTHS \$49,300 BILLINGS, DONALD E; TEMPERATURE STRUCTURE OF THE CORONA CLOSE TO THE SUN (AGJILIT); 24 MONTHS \$23,700

BLUMEN, WILLIAM; STABILITY AND ENERGY PARTITION IN STRATIFIED FLUID (AGJISSS), 24 MONTHS \$36,600

CHIMONAS, GEORGE, BINAUDI, FRANCO, AND HOOKE, WILLIAM H; STUDY OF WAVE DYNAMICS IN THE LOWER TROPOSPHERE (A031604); 12 MONTHS \$38,200

LAWRENCE, GEORGE M; DISSOCIATION FRAGMENT SPECTROSCOPY BY UV AND ELECTRONS (A0J5020); 12 MONTHS \$44,200

BARRY, ROGER G: DOCTORAL DISSERTATION RESEARCH IN METEOPOLOGY (A033177): 16 MONTHS \$900

BEATY, EARL C; A STUDY OF SECONDARY ELECTRONS PRODUCED IN ELECTRON IMPACT IONIZATION (A031419); 24 MONTHS \$87,800

HART, JOHN E; THE DYNAMICS OF ROTATING STRATIFIED FLUIDS (A034937); 24 MONTHS \$35,000

UNIVERSITY OF DENVER

ROEDERER, JUAN G: MAGNETOSPHERIC PARTICLE INJECTION AND TRANSFER (A031111 X00); 12 MONTHS \$35,500

UNIVERSITY OF DENVER-DENVER RESEARCH INSTITUTE

MURCRAY, DAVID G: DISTRIBUTION OF NITRIC ACID IN THE STRATOSPHERE (A086828 001); \$30,500

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION-

ENVIRONMENTAL RESEARCH LABORATORIES

HESS, WILMOT N: AERONOMICAL RESEARCH AT THE JICAMARCA RADIO OBSERVATORY (AGOOJ74); 12 MONTHS \$90,000

### CONNECTICUT

CENTER FOR THE ENVIRONMENT AND MAN INC

ATWATER, MARSHALL A: EFFECTS OF POLLUTANTS ON THE AT-MOSPHERIC THERMAL STRUCTURE- A NUMERICAL STUDY (A031206); 12 MONTHS \$19,300

YALE UNIVERSITY

REIFSNYDER, WILLIAM E; QUANTITY AND QUALITY OF INCIDENT LIGHT IN FOREST SUNFLECKS (A015017 001); 6 MONTHS \$2,800

WALKER, JAMES C G, AND WICKWAR, VINCENT B; EXPERIMENTAL STUDIES USING THE INCOHERENT BACKSCATTER AT COLLEGE, ALASKA (A032384); 12 MONTHS \$10,200

HERZELBERG, ARVID, THEORY OF ATMOSPHERIC COLLISION PROCESSES (A014118); 12 MONTHS \$33,000

### DISTRICT OF COLUMBIA

NONE: OTHER PROGRAM AWARDS (OLAWDS): \$16,258

CATHOLIC UNIVERSITY OF AMERICA

WHANG, Y C: MAGNETOHYDRODYNAMIC STRUCTURE OF THE SOLAR WIND (A029057 X01): 12 MONTHS \$28,600

CHANG, C C; DYNAMICS OF ATMOSPHERIC VORTICES - TORNADO, DUST WHIRLS, AND WATERSPOUTS (A032017); 24 MONTHS \$60,400

DEPARTMENT OF NAVY-OFFICE OF NAVAL RESEARCH

HAYES, R V; 1978 CHURCHILL SKYHOOK PROGRAM (AG00247 001); 12 MONTHS \$85,000

NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL SIEVERS, JOHN R: COMMITTEE ON ATMOSPHERIC SCIENCES (C310009 018); 12 MONTHS \$17,300

ODISHAW, HUGH: SUPPORT OF THE GEOPHYSICS RESEARCH BOARD AND ITS AFFILIATES (C110049 009°); 12 MONTHS \$103,825



### **FLORIDA**

### ROWARD WATERS COLLEGE

GANGULI, GOURANDA; COMPARISON OF TECHNIQUES FOR MEASURING TRACE SPECIES IN THE ATMOSPHERE (A014141); 15 MONTHS \$21,400

### PLORIDA STATE UNIVERSITY

STEPHENS, JESSE J; TRANSIENT SCATTERING BY HYDROMETEORS (AMOSIS); 18 MONTHS \$20,000

#### UNIVERSITY OF PLORIDA

GREEN, ALEX E S; ATMOSPHERIC RADIATIVE TRANSFER AND AT-MOSPHERIC PHYSICS (A0241)6 001); 12 MONTHS \$42,000

UMAN, MARTIN A; THE CALCULATION OF LIGHTNING RETURN STROKE CURRENTS OVER LAND AND WATER FROM MEASURED BLECTRIC FIELDS (A031976); 12 MONTHS \$39,100

# UNIVERSITY OF MIAMI-SCHOOL OF MARINE AND ATMOSPHERIC SCIENCES

LHERMITTE, ROGER M; DUAL-DOPPLER RADAR PROBING (A0281)3 X61); 12 MONTHS \$74,900

WENZEL, ALAN R. WAVE PROPAGATION IN RANDOM MEDIA (AMISSI): BY MONTHS \$43,600

KRAUS, ERIC B; OCEAN-ATMOSPHERE INTERACTION (A03/350 X00); 12 MONTHS \$79,800

#### OFORGIA

### CLARK COLLEGE

KIANG, C 8; NUCLEATION THEORY AND ITS APPLICATIONS (AGREGOR); 6 MONTHS \$1,300

KIANG, C S, AND WALKER, G H; STUDY OF NUCLEATION THEORY (AGGGG); 24 MONTHS \$63,100

### GEORGIA INSTITUTE OF TECHNOLOGY

ROPER, R G; WIND IN THE 80-100 KILOMETER REGION (A026626 001); 24 MONTHS \$65,800

### HAWAII

### UNIVERSITY OF HAWAIL

STEIGER, WALTER R; DYNAMICS AND MAINTENANCE OF THE NICHTTIME IONOSPHERE AT HAWAII (A018276 001); 12 MONTHS \$43,300 ROELOFS, T H, AND YUEN, PAUL C; IONOSPHERE STUDIES USING TOTAL ELECTRON CONTENT (A017350 001); 12 MONTHS \$42,000

YUEN. PAUL C, NAJITA. KAZUTOSHI, AND FANG, GAUTIER T; CAUSES OF IONOSPHERIC VARIATIONS (AMMA 001); T MONTHS \$22,200 MCCABE, MARIE K, AND ZIRKER, J B; SOLAR CORONAL ACTIVITY (ADSSM) 001; 12 MONTHS \$52,200

WOLSTENCROFT, R D; NIGHT-SKY OBSERVATIONS (A028201 001); 12 MONTHS \$40,000

TAKAHASHI, TSUTOMU; SIMULTANEOUS OBSERVATION OF THE IN CLOUD ELECTRICAL CHARGE ON IONS, CLOUD DROPLETS AND RAIN-DROPS (A030077); 24 MONTHS \$108,500

### **ILLINOIS**

### UNIVERSITY OF CHICAGO

ATLAS, DAVID, AND SRIVASTAVA, R C; DOPPLER RADAR STUDIES OF STRATIFORM PRECIPITATION (A017430 X01); 12 MONTHS \$83,600

SIMPSON, JOHN A; SOLAR, INTERPLANETARY AND MAGNETOSPHER-IC STUDIES WITH ENERGETIC PARTICLES (A098368 X01); 18 MONTHS \$159,600

MEYER, PETER; PROPAGATION, MODULATION AND ACCELERATION OF ELECTRONS AND NUCLEI IN THE SOLAR SYSTEM (A011787 X00); 12 MONTHS \$83,900

## UNIVERSITY OF ILLINOIS AT URBANA

YEH, K.C., AND LIU, C.H.; STUDY OF CERTAIN IONOSPHERIC WAVE PROPAGATION PROBLEMS (A01314) 001); 12 MONTHS \$26,700

BOWHILL, SIDNEY A; STUDY OF PRODUCTION AND LOSS PROCESSES FOR ATMOSPHERIC IONISATION (A085640 001): 12 MONTHS \$67,600

BOWHILL, S A; STUDIES OF IONOSPHERIC DYNAMICS BY THOMSON SCATTER (AGRESS GOS); 12 MONTHS \$64,900

SHER, MICHAEL S, AND OGURA, MASAKO; EFFICIENCY OF ILLIAC IV COMPUTER IN ATMOSPHERIC DYNAMICS CALCULATIONS (A031407); 12 MONTHS 443,200

MAK, MAN-KIN; THEORETICAL STUDIES ON GENERAL PLANETARY BOUNDARY LAYERS (A018113), 12 MONTHS \$20,500

### INDIANA

### INDIANA UNIVERSITY, BLOOMINGTON

WINKLER, ROBERT L; PROBABILISTIC PREDICTION IN METEOROLO-GY (AMITIS); 24 MONTHS \$30,500

### PURDUS UNIVERSITY

SMITH, PHILLIP, AND VINCENT, DAYTON; THE ENERGETICS OF OPEN ATMOSPHERIC SYSTEMS (Acrosss on); 12 MONTHS \$61,500

### **IOWA**

## IOWA STATE UNIVERSITY OF SCIENCE & TECHNOLOGY

STANFORD. JOHN L; SLECTROMAGNETIC STUDIES OF SEVERE CON-VECTIVE STORMS (A051716); 24 MONTHS \$92,700

### UNIVERSITY OF IOWA

JOYCE, GLENN, AND SHAWHAN, STANLEY D; NUMERICAL IN-VESTIGATION OF PLASMAS (A031878); 12 MONTHS \$24,900

#### KANSAS

### UNIVERSITY OF KANSAS

BEARD, DAVID B; THE EXTERNAL GEOMAGNETIC FIELD AND MAGNETOSPHERIC PHENOMENA (A014019 001); 12 MONTHS \$41,703

#### MARYLAND

### APPLIED PHYSICS LABORATORY

KRIMIGIS, S M; STUDIES OF MULTIPLE-CHARGED ENERGETIC TRAPPED NUCLEI IN THE RADIATION BELT (ACCOUNT); 24 MONTHS \$17,500

### ATOMIC ENERGY COMMISSION

COX, ARTHUR N; TOTAL SOLAR ECLIPSE, JULY 10, 1878 (ACCOSTT); 8 MONTHS \$12,000

### NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION

TOWNSEND, J W; IONOSPHERIC STUDIES AT JICAMARCA RADIG OB-SERVATORY (AGOODIS 003): 12 MONTHS \$25,900

### UNITERSITY OF MARYLAND, COLLEGE PARK

LANDSBERG, H. E. CLIMATIC CHANGES THROUGH URBANIZATION (A011904 X01); 12 MONTHS \$38,800

### MASSACHUSETTS

### HARVARD UNIVERSITY

GOODY, RICHARD, ATMOSPHERIC PHYSICS AND DYNAMICS (A031890 X00); 12 MONTHS \$205,300

### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

STARR, VICTOR P; OBSERVATIONAL AND THEORETICAL STUDIES OF PLANETARY ATMOSPHERES (A001110 X01): 12 MONTHS \$186,400

SANDERS, FREDERICK; ANALYSIS OF SUBSYNOPTIC-SCALE PROCESSES IN EXTRATROPICAL CYCLONES AND THEIR RELATION-SHIP TO THE LARGER-SCALE CIRCULATION (A011602 X01); 12 MONTHS 473.500

STARR, VICTOR P; OBSERVATIONAL STUDIES OF THE MOTION AND DYNAMICS OF THE JOVIAN ATMOSPHERE (ACCESS) 001); 12 MONTHS 442900

MOLLO-CHRISTENSEN, ERIK; THE DYNAMICS OF AIR-SEA INTERAC-TION (A08888 X01); 12 MONTHS \$17,400

BEARDSLEY, ROBERT C; EXPERIMENTAL RESEARCH IN GEOPHYSI-CAL FLUID DYNAMICS (AGGOSTS): 24 MONTHS \$10,700

MALKUS, WILLIAM V R; GEOPHYSICAL FLUID DYNAMICS (AGGESSA); 24 MONTHS \$50,900

EVANS, JOHN V; DESIGN STUDIES FOR AN UPPER ATMOSPHERE OB-SERVATORY (A031904); 12 MONTHS \$181,600

### University of Massachusetts, amherst

GOLDENBERG, H MARK; MEASUREMENT OF THE SOLAR OBLATE-NESS (Accessed 601); \$5,600

### HARVARD UNIVERSITY-OBSERVATORY

DALGARNO, A; METASTABLE OXYGEN ATOMS IN THE MESOSPHERE AND STRATOSPHERE (A030181); 12 MONTHS \$22,100

### **MICHIGAN**

### UNIVERSITY OF MICHIGAN

EPSTEIN, EDWARD 8; STOCHASTIC DYNAMIC PREDICTION (A019148 001); 4 MONTHS \$28,000

HAYS, PAUL B, AND NAGY, ANDREW F; EXPERIMENTAL AND THEORETICAL AIRGLOW STUDIES (A028890 X01); \$15,400

HAYS, PAUL B, AND NAGY, ANDREW F; EXPERIMENTAL AND THEORETICAL AIRGLOW STUDIES (Acrespo XOS); 18 MONTHS \$10,000

JONES, LESLIE M, AND BARTMAN, FREDERICK L; THE ATMOSPHER-IC INFORMATION CONTENT OF AIRCRAFT SOUND (A01886); 12 MONTHS 122.500

### MISSOURI

### UNIVERSITY OF MISSOURI, ROLLA

STAMPFER, JOSEPH F JR; THE EFFECTS AND AMOUNTS OF SUR-FACE ACTIVE MATERIALS IN THE ATMOSPHERE (A001809 001); 24 MONTHS \$17,100

LEVENSON, LEONARD L; WATER VAPOR-SURFACE REACTIONS.

DYNAMIC AND STEADY STATE STUDIES WITH MOLECULAR BEAMS
AND QUARTE CRYSTAL MICROBALANCES (A011918 001): 12 MONTHS
\$29,000

KASSPER, JAMES L JR; EXPERIMENTAL AND THEORETICAL STU-DIES OF NUCLEATION PHENOMENA (A028711 X01); 12 MONTHS \$62,500



ALOTS, DARRYL J, QUANTITATIVE STUDIES OF THE NUCLEATION PROCESS (Adjusts): 24 MONTHS 858800

PLUMMER, PATRICIA L M, HALE, BARBARA N, AND LUND, LOUIS H;
THE HOMOGENEOUS NUCLEATION OF WATER FROM A SUPERSATURATED VAPOR (AGGISTO): 24 MONTHS 240,500

### WASHINGTON UNIVERSITY

GARDNER, RICHARD A; URBAN MICROMETEOROLOGY- THE ROLE OF THE URBAN HEAT ISLAND IN THE AIR POLLUTION EPISODE (AGGRESS); 18 MONTHS 120 000

### NEVADA

### DESERT RESEARCH INSCITUTE

TELFORD, JAMES W: AIRBORNE INVESTIGATIONS OF THE STRUC-FURE OF ATMOSPHERIC CONVECTION AND BOUNDARY LAYER TRANSFERS (AGGOGG X00): 12 MONTHS \$170,000

#### NEW HAMPSHIEL

### DARTMOUTH COLLEGE

STRONBEHN, JOHN W; ELECTROMAGNETIC WAVE PROPAGATION IN THE ATMOSPHERE (ASSISSE); 24 MONTHS BID 400

## UNIVERSITY OF NEW HAMPSHIRE, DURHAM

FROST, ALBERT D; TO CONDUCT RESEARCH AT THE UNIVERSITY OF SHEFFIELD (ENGLAND) DURING THE PERIOD SEPTEMBER 1, 1971 TO JULY 1, 1978 (ACCOUNT), 12 MONTHS \$545

KAUFMANN, RICHARD L: MAGNETOHYDRODYNAMIC WAVES NEAR THE MAGNETOPAUSE (AGSISGI XOO): 12 MONTHS 128 100

LOCKWOOD, JOHN A, INTENSITY TIME VARIATIONS IN THE COSMIC RADIATION (A01171 X00); 12 MONTHS \$39,400

LOCKWOOD, JOHN A; MEASUREMENTS OF THE NEUTRON AND GAMMA-RAY INTENSITY IN THE ATMOSPHERE (AGJSSS); 24 MONTHS 196,900

### **NEW JERSEY**

### PRINCETON UNIVERSITY

MELLOR, GEORGE L, AND SMAGORINSKY, JOSEPH: RESEARCH IN GEOPHYSICAL FLUID DYNAMICS (A014334 001); 24 MONTHS \$40,700

### RUTGERS UNIVERSITY

PESKIN, RICHARD L: TURBULENCE AND TURBULENT DIFFUSION IN STRATIFIED FLOW (A03141), 24 MONTHS \$60,000

### NEW MEXICO

## NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY

BROOK, MARX; THUNDERSTORM ELECTRIFICATION (A038191 X00); 12 MONTHS \$76,300

## UNIVERSITY OF NEW MEXICO

REGENER, VICTOR H. AND SWINSON, DEREK B; INVESTIGATION OF COSMIC RAY ANISOTROPIES IN INTERPLANETARY SPACE USING UN-DERGROUND COSMIC RAY DETECTORS (AGJOSPI): 24 MONTHS \$41,400

### NEW YORK

### CLARKSON COLLEGE OF TECHNOLOGY

NEWELL. ALLAN; NONLINEAR PROCESSES IN GEOPHYSICAL FLUID DYNAMICS (A017147 001): 24 MONTHS \$58,200

### CORNELL UNIVERSITY

FARLEY, DONALD T; STUDIES OF THE EQUAYORIAL IONOSPHERE AND MAGNETOSPHERE (A004330 004); 12 MONTHS \$32,600

BRICE, NEIL; STUDIES OF MAGNETOSPHERIC RESEARCH (A011415 608): 12 MONTHS \$49,800

SAGAN, CARL; INVESTIGATIONS OF THE ATMOSPHERES OF VENUS AND JUPITER (A083845 008), 12 MONTHS \$38.500

AUER, P L, AND MORSE, D L; LABORATORY SIMULATION OF PARTI-CLE THERMALIZATION IN THE EARTH'S BOW SHOCK (A031173); 12 MONTHS 184 900

### NEW YORK UNIVERSITY

FRIEND, JAMES, AND LEIFER, ROBERT; FORMATION OF STRATO-SPHERIC CONDENSATION NUCLEI (Accesses); 12 MONTHS \$49,900

### STATE UNIVERSITY AT ALBANY

ORVILLE, RICHARD E; QUANTITATIVE STUDY OF LIGHTNING
(A011014 001): 4 MONTHS \$14.600

MOHNEN, VOLKER A; ION MOLECULE REACTIONS OF ATMOSPHERIC IMPORTANCE (A022740 001); 12 MONTHS \$46,200

BLANCHARD, DUNCAN C; MECHANISM FOR THE CONCENTRATION OF BACTERIA IN JET AND FILM DROPS (A013111 001): 12 MONTHS \$29,200 CHESSIN, HENRY; ATMOSPHERIC AEROSOL ANALYSIS BY X-RAY SPECTROMETRIC TECHNIQUES (A011003); 24 MONTHS \$44,200

ARNASON, GEIRMUNDUR; NUMBRICAL SIMULATION OF THE MICROPHYSICAL AND MACROPHYSICAL PROCESSES OF MOIST CONVECTION (Adjesso X00): 12 MONTHS \$58,700

SCHAEFER, VINCENT J. AND HOGAN, AUSTIN W; AEROSOL CONCENTRATIONS ON A GLOBAL SCALE (A022502\*); 12 MONTHS \$25,000

### UNIVERSITY OF ROCHESTER

BADKWAR, GAUTAM; RESEARCH IN COSMIC RAY PHYSICS (A05/140); 12 MONTHS \$6,000

COLUMBIA UNIVERSITY-LAMONT-DOHERTY GEOLOGICAL

OBSERVATORY

HERRON, THOMAS J; IONOSPHERIC MOTIONS (ACISINO); 24 MONTHS

DONN, WILLIAM L: WAYES IN THE NEUTRAL AND IONIZED AT-MOSPHERE (A039710 X00): 12 MONTHS \$76,500

### **NORTH CAROLINA**

### UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

RIPPERTON, LYMAN A; CHEMICAL AND ENVIRONMENTAL FACTORS
AFFECTING OZONE CONCENTRATION IN THE LOWER TROPOSPHERE
(A01415 001): 12 NONTHS \$60,000

#### OHIO

### CASE WESTERN RESERVE UNIVERSITY

TANENBAUM, B SAMUEL; RESEARCH ON IONOSPHERIC PHYSICS (A010717 002): 24 MONTHS \$103,000

FRYE, GLENN M JR; ATMOSPHERIC HIGH ENERGY NEUTRONS (Acaposs 001): 12 MONTHS \$133,700

JANOWITZ, GERALD 8; THE FLOW OF STABLY STRATIFIED FLUIDS OVER OBSTACLES (AGJISS): 24 MONTHS \$30 100

### OREGON

### OREGON STATE UNIVERSITY

ELLIOTT, WILLIAM P. PRECIPITATION PROCESSES IN WESTERN OREGON (AGIII41): 24 MONTHS \$124.300

PETERSON, ERNEST W; COMPUTER MODELING OF FLOW OVER IN-HOMOGENEOUS TERRAIN (AGS1848): 24 MONTHS \$34,000

HEWSON, E WENDELL, AND GAY, LLOYD; DOCTORAL DISSERTATION RESEARCH IN THE ENVIRONMENTAL SCIENCES (AGG1245): 12 MONTHS \$200

### PENNSYLVANIA

LAVOIE, RONALD L: OTHER PROGRAM AWARDS (GIAWDS); 14 MONTHS \$37,900

### DREXEL UNIVERSITY

COONEY, JOHN A; LASER RADAR (LIDAR) RESEARCH FOR MEASURING ATMOSPHERIC WATER VAPOR PROFILES (AGISSI); 12 MONTHS \$40,000

### PENNSYLVANIA STATE UNIVERSITY

PANOFSKY, HANS A. AND BLACKADAR, ALFRED K; ENERGETICS AND INTERACTIONS OF ATMOSPHERIC MOTION (A001893 X01); 12 MONTHS 199,500

HEICKLEN, JULIAN P, AND SIMONAITIS, ROMUALDAS; CHEMICAL REACTIONS OF IMPORTANCE IN THE EARTH'S AND PLANETARY AT-MOSPHERES (A014)85 00%; 24 MONTHS \$99,000

FERRARO, A J, AND LEE, H S; D-REGION STUDIES AT MID-LATITUDE BY MEANS OF WAVE INTERACTION (A013885 003); 24 MONTHS \$100,000

HAGEN, JOHN P; MULTI-FREQUENCY SOLAR OBSERVATIONAL PRO-GRAM (ACESIES COI); 12 MONTHS \$50,100

HOVERMALE, JOHN B, AND CAHIR, JOHN J; WEATHER PRODUCING CIRCULATIONS OF SUBSYNOPTIC SCALES (ADJESS); 12 MONTHS \$30,900 NISBET, JOHN S; IONOSPHERIC INVESTIGATIONS (ADJILIE X00); 12 MONTHS \$56,400

### UNIVERSITY OF PENNSYLVANIA

FRIEDMAN, IRVING; STABLE ISOTOPES IN RAINDROPS- GEOCHEMISTRY AND METEOROLOGY (A013860); 24 MONTHS \$25,200

### UNIVERSITY OF PITTSBURGH

DONAHUE, T M; AIRGLOW AND AURORAS IN PLANETARY AT-MOSPHERES (A027638 001); 12 MONTHS \$119,000

SHEMANSKY, DONALD E; LABORATORY STUDY OF THE NITROGEN AFTERGLOW (A028851 001); 12 MONTHS \$34,300

## FRANKLIN INSTITUTE-BARTOL RESEARCH FOUNDATION

POMERANTZ. MARTIN A; SOLAR-TERRESTRIAL RELATIONSHIPS MANIFESTED BY COSMIC RAY VARIATIONS (AGJISJI); 12 MONTHS \$16,000

## RHODE ISLAND

# UNIVERSITY OF RHODE ISLAND-GRADUATE SCHOOL OF OCEANOGRAPHY

DUCE, ROBERT A; LEAD AND GASEOUS IODINE AND BROMINE IN POLLUTED AIR (A031918); 24 MONTHS \$50,000



### TENNESSEE

#### SOUTHWESTERN AT MEMPRIS

STREETE. J L; MEASUREMENT OF INTENSITY RATIOS OF INFRARED EMISSION LINES OF HELIUM IN SOLAR PROMINENCES (AGGOST); 12 MONTHS \$12,700

### UNIVERSITY OF TENNESSEE, KNOXVILLE

FOX, KENNETH; COLLABORATIVE RESEARCH IN ULTRA-LONG PATH, HIGH RESOLUTION MOLECULAR SPECTROSCOPY (AGJOTIJ); 12 MONTHS £10,200

#### TEXAS

#### RICE UNIVERSITY

WOLF, R A. AND DESSLER, A J; MAGNETOSPHERIC CONVECTION (A027204 001); 24 MONTHS \$85,400

MICHEL, F CURTIS, AND CLOUTIER, PAUL A: THEORETICAL STUDY OF THE INTERACTION OF THE SOLAR WIND WITH PLANETARY AT-MONPHERES (A018034 X01); 12 MONTHS \$19,400

FEW, ARTHUR A JR; CHANNEL STRUCTURE AND ELECTRIC CHARGE STORAGE IN THUNDERSTORM CLOUDS LIGHTNING (AUJI051), 24 MONTHS \$106,700

### TEXAS A 4 M UNIVERSITY

THOMPSON, AYLMER H: INVERSION FORMATION, MAINTENANCE, AND BREAKDOWN PROCESSES OVER NORTHWEST NORTH AMERICA (A0J0619): 15 MONTHS \$29,100

BYERS, HORACE R, AND DAS, PHANINDRAMOHAN: MICRODYNAMICS OF WARM CUMULUS CONGESTUS (AUGISTO); 12 MONTHS \$31,100

#### UNIV OF TEXAS AT AUSTIN

CLARK, JOHN H E: DYNAMICS OF THE STRATOSPHERE (A03/408); 24 MONTHS \$14,200

### UNIV OF TEXAS AT DALLAS

PALMEIRA, R & R; DALLAS AND CHURCHILL SUPER NEUTRON

MONITOR STATIONS (AGUSSEL UNIT): 12 MONTHS \$41,000
HANSON, W B, AND MCCLURE, J P; OGO VI HIGH RESOLUTION ION
TRAP STUDIES OF IONOSPHERIC IRREGULARITIES (AGUSTES); 24 MONTHS \$100,000

TINSLEY, BRIAN A, AND CHRISTENSEN, ANDREW B; TROPICAL, MID AND HIGH LATITUDE STUDIES OF SELECTED AIRGLOW EMISSIONS (A024762 X00): 12 MONTHS \$50,600

#### UTAH

### UNIVERSITY OF UTAH

KETCHAM, WARREN M; CLOUD DROPLET SIZE DISTRIBUTION USING OPTICAL CHARACTER RECOGNITION TECHNIQUES (A031164): 12 MONTHS \$29,000

### UTAH STATE UNIVERSITY

DESPAIN, ALVIN M. AND BAKER, KAY D. STUDY OF INFRARED AU-RORAS (A019171 001); \$5,000

MEGILL, LAWRENCE R; STUDY OF MESOSPHERIC TRACE CON-STITUENTS WITH ROCKET PROBES (A023898 001); 12 MONTHS \$59,400 MEGILL, LAWRENCE R; STUDY OF MESOSPHERIC TRACE CON-

STITUENTS WITH ROCKET PROBES (A025898 002); \$6,000

### WASHINGTON

### UNIVERSITY OF WASHINGTON

VALI, VICTOR, AND GOLDSTEIN, RAYMOND; COLLABORATIVE RESEARCH IN ULTRA-SONG PATH, HIGH RESOLUTION MOLECULAR SPECTROSCOPY (A030714): 12 MONTHS \$42,500

VALL, VICTOR, AND GOLDSTEIN, RAYMOND: ULTRA-LONG PATH, HIGH RESOLUTION MOLECULAR SPECTROSCOPY (ADJUST) 46,500

BUSINGER, J A. AND FLEAGLE, R G; COMPREHENSIVE STUDY OF THE STRUCTURE OF THE PLANETARY BOUNDARY LAYER (AGAINIT X00); 12 MONTHS \$132,100

CLARK, KENNETH C: UPPER ATMOSPHERE EXCITATION (Addaine) X00); 12 MONTHS \$56,800

PARKS, GEORGE K; AURORAL BREMSSTRAHLUNG X-RAYS FROM

CONJUGATE REGION OF THE GEOSTATIONARY NATELLITE (AUGO21) X00); 12 MONTHS \$64,100

PARKS, GEORGE K, AND WINCKLER, JOHN R; ANALYSIS OF BALLOON X-RAY DATA OBTAINED FROM ATS-1 AURORAL CONJUGATE (AUGITIO); 12 MONTHS \$19.300

HODGE, PAUL W. AND CHARLSON, ROBERT J. ASTRONOMICAL AND SPACE TECHNIQUES FOR RESEARCH ON THE ATMOSPHERE (AUGUS6); 24 MONTHS \$100,000

## WASHINGTON STATE UNIVERSITY

CRAINE, LLOYD B: INFRA-SONIC WAVES IN THE ATMOSPHERE PACIFIC NORTHWEST (AUGUITE 001): 6 MONTHS \$3,700

HOWER, GLEN L, AND SCHRADER, DAVID H; COORDINATED STUDY OF THE LOWER IONOSPHERIC REGIONS (AUJI913); 12 MONTHS \$32,700

### BATTELLE MEMORIAL INSTITUTE-BATTELLE NORTHWEST

HOCH, RICHMOND J: CONNECTION BETWEEN THE MAGNETO-SPHERE AND SAR-ARCS (April 164); 12 MONTHS \$34,900

### WISCONSIN

### UNIVERSITY OF WISCONSIN, MADISON

KUTZBACH, JOHN E. AND BRYSON, REID A; INTERDISCIPLINARY RESEARCH PROGRAM IN CLIMATOLOGY (A010651 XO2); 16 MONTHS \$180,000

WAHL, EBERHARD W; DYNAMIC . CLIMATOLOGICAL STUDIES OF HEMISPHERIC CIRCULATION PARAMETERS (A011808 001); 12 MONTHS \$53,400

ROESLER, F L: HIGH-RESOLUTION SPECTROSCOPIC STUDIES IN AERONOMY (A014133 003): 12 MONTHS \$35,000

BIRKEMEIER, WILLIAM P, LETTAU, HEINZ H, FONTAINE, ARTHUR B. AND SECHRIST, F S. MICROWAVE TROPOSCATTER PROBING OF THE ATMONPHERE (AUIEEIE 004): 12 MONTHS \$67,000

JOHNSON, DONALD R, AND HORN, LYLE H; ENERGY, MASS AND ANGULAR MOMENTUM BUDGETS OF EXTRATROPICAL CYCLONES (A0J0978 X00): 12 MONTHS \$129,900

MCCLINTOCK, MICHAEL, AND HOUGHTON, DAVID, NUMERICAL MODELING OF ATMOSPHERIC CIRCULATION CHANGES CAUSED BY AIR POLLUTION (Addition) 12 MONTHS \$11,700

WEINMAN, JAMES A: RADIATIVE AND PHOTO CHEMICAL PROPER-TIES OF STRATOSPHERIC CONSTITUENTS (AGJISSI); 24 MONTHS \$47,800

### WYOMING

### UNIVERSITY OF WYOMING

HOPMANN, DAVID J; MODULATION OF SOLAR COSMIC RAYS DURING GEOMAGNETIC STORMS (A014917 003); 4 MONTHS \$6,800

### EARTH SCIENCES

### ALASKA

### UNIVERSITY OF ALASKA-GEOPHYSICAL INSTITUTE

OSTERKAMP, T E. AND DENSON, C S. EFFECTS OF ICE FORMATION ON AN ALANKAN STREAM (A0J0748); 12 MONTHS \$34,900

PULPAN, HANS, AND BERG, EDUARD; SEISMIC ENGINEERING STU-DIEN IN ALASKA (A014941"); 24 MONTHS \$21,500

### ARIZONA

### ARIZONA STATE UNIVERSITY

MOORE, CARLETON B; ANALYSIS OF SELECTED ELEMENTS IN METEORITES AND RELATED TERRESTRIAL ROCKS (AUJ287 X00), 12 MONTHS \$31,400

HOLLOWAY, JOHN R: INVESTIGATIONS OF C-H-O-N FLUIDS AT HIGH PRESSURES AND TEMPERATURES WITH APPLICATION TO EXPERI-MENTAL PETROLOGY (ADJULU); 24 MONTHS \$33,900

### UNIVERSITY OF ARIZONA

DAMON, PAUL E; CARBON-14 FLUCTUATIONS IN THE ENVIRONMENT OF EARTH AND ATMOSPHERE (A017485 001); 24 MONTHS \$40,000

DAMON, PAUL E: CORRELATION AND CHRONOLOGY OF ORE DEPOSITS AND VOLCANIC ROCKS (ABI1220); 24 MONTHS \$70,100

DAMON, PAUL E, AND LIVINGSTON, DONALD E: GEOCHEMICAL DAT-ING OF PRECAMBRIAN ROCKS IN SOUTHWESTERN UNITED STATES AND MEXICO (A031148): 12 MONTHS \$28:300

### CALIFORNIA INSTITUTE OF TECHNOLOGY

ANDERSON, DON L: STUDY OF THE ELASTIC AND ANELASTIC PRO-PERTIES OF ROCKS AND ROCK-FORMING MINERALS AT HIGH TEM-PERATURE AND HIGH PRESSURE (A012703 001); 24 MONTHS \$100,000

ALBEE, ARDEN L; CHEMICAL EQUILIBRIUM IN COEXISTING PHASES OF QUARTZ-MUNCOVITE ROCK (Aut1867 001): 24 MONTHS \$109,700

SILVER, LEON T; FIELD AND INOTOPIC STUDIES OF THE OLDER GEOLOGIC HISTORY OF THE SOUTHWESTERN MARGIN OF NORTH AMERICA (A015989 001); 8 MONTHS \$58,000

TAYLOR, HUGH P JR; OXYGEN AND HYDROGEN ISOTOPE STUDIES OF ROCKS AND MINERALS (AUJUSS? X00); 12 MONTHS \$49,800

EPSTEIN, SAMUEL; OXYGEN, HYDROGEN, CARBON AND SILICON ISOTOPE STUDIES OF NATURALLY OCCURRING MATERIALS (A031345 X00); 12 MONTHS \$67,100

WASSERBURG, G J, AND ALBEE, A L; GEOCHRONOLOGY AND ABUNDANCE OF RARE GASES IN NATURE (AGJ1749); 24 MONTHS \$80,800 AHRENS, THOMAS J; GEOPHYSICAL LIGHT GAS'GUN (AUJ4107); 12

MONTHS \$67,300 PATTERSON, CLAIR C; BIOLOGICAL DISCRIMINATION FACTORS FOR METALS WITHIN NATURAL ECOSYSTEMS (BOJIOJ8\*); 12 MONTHS \$18,000

### CALIFORNIA STATE UNIVERSITY, LOS ANGELES

COLBURN, IVAN P. ANALYSIN OF PALEOCURRENT FRAMEWORK OF CRETACEOUS TURBIDITES IN CALIFORNIA (A014860); \$1,562

COLBURN, IVAN P; ANALYSIS OF THE PALEOCURRENT FRAMEWORK OF THE CALIFORNIA CRETACEOUS TURBIDITE TER-RANE AND ITS BEARING ON IMPORTANT GEOLOGIC HYPOTHESES (A014860 001); 12 MONTHS \$11,188



### **EARTHQUAKE TECTONICS INC**

BLOXSOM, DANIEL E JR; FIELD MEASUREMENTS OF EMBRYONIC EARTHQUAKES (A031049); 3 MONTHS \$12,900

#### STANFORD UNIVERSITY

LUTH, W C, AND JAHNS, R H; THE GRANITIC ROCKS (A001684 004); 24 MONTHS \$110,000

COX, ALLAN V; EFFECT OF COSMIC RAY EXPOSURE ON MAGNETIC PROPERTIES OF METEORITES AND LUNAR NAMPLES (AGGOGGS); 24 MONTHS \$49,000

CLAERBOUT, JON F; NUMERICAL MODELING OF GEOMAGNETIC FIELD GENERATION (A030764), 12 MONTHS \$17,200

LONGWELL, CHESTER R: GEOLOGICAL STUDY OF HENDERSON QUADRANGLE AND EASTERN PART OF LAS VEGAS QUADRANGLE (AGGIEGO); 6 MONTHS \$4,100

### UNIVERSITY OF CALIFORNIA, BERKELEY

VERHOOGEN, JOHN; THE EARTH'S CORE (Accided 00%); 24 MONTHS \$36,000

BOLT, BRUCE A; INFERENCES ON THE EARTH'S INTERIOR (Acoustics cost): 44 MONTHS \$90,000

HELGESON, HAROLD C: PREDICTION OF MASS TRANSFER IN GEOCHEMICAL PROCESSES INVOLVING AQUEOUS SOLUTIONS (A025314 001); \$30,000

HELGESON, HAROLD C; PRACTICAL APPLICATIONS OF THEORETI-CAL GEOCHEMISTRY TO GEOLOGIC PROBLEMS (A0J0578); 12 MONTHS 19 MONTHS

\$9,800
MORRISON, H FRANK; THE USE OF VLF FIELDS IN GEOLOGICAL
MAPPING (A03085); 12 MONTHS \$9,900

CARMICHAEL, IAN S E; STUDIES IN IGNEOUS PETROLOGY (AGELLS X00): 12 MONTHS \$26,100

### UNIVERSITY OF CALIFORNIA, DAVIS

MOORES, ELDRIDGE M; EMPLACEMENT OF FRANCISCAN-TYPE ROCKS AND ORIGIN OF RELATED MAFIC AND ULTRAMAFIC ROCKS (AGILPRI 001): 12 MONTHS BISO00

GREEN, HARRY W II, AND RADCLIFFE, S VICTOR; HIGH VOLTAGE TRANSMISSION ELECTRON MICROSCOPY STUDY OF THE DEFORMATION OF ROCK-FORMING MINERALS (AGJIJSS), 24 MONTHS 177,400

### UNIVERSITY OF CALIFORNIA, LOS ANGELES

KAULA, WILLIAM M. AND SCHUBERT, GERALD; THEORY OF MO-TIONS IN THE EARTH'S MANTLE (A010964 001); 24 MONTHS \$48,600

SCHOPF, J WILLIAM; MORPHOLOGIC AND GEOCHEMICAL STUDIES OF PRIMITIVE MICROORGANISMS (A031741 001); 12 MONTHS \$27,200 SHREVE, RONALD L; GLACIER HYDRAULICS (A030731); 24 MONTHS

\$29,000
RUMBLE, DOUGLAS III; THERMODYNAMIC PROPERTIES OF THE

RUMBLE, DOUGLAS III; THERMODYNAMIC PROPERTIES OF THE FLU'ID PHASE OF REGIONAL METAMORPHISM (AOSIRCE); 24 MONTHS \$33,100

KNOPOFF, LEON; SURFACE WAVE AND FREE MODE ANALYSIS AND INTERPRETATION (AGGISTS); 12 MONTHS \$61,300

KENNEDY, GEORGE C, AND KIEFFER, SUSAN; THERMAL CONDUC-TIVITY OF SOLIDS AT HIGH PRESSURE (A0J1897); 12 MONTHS \$60,500

WASSON, JOHN T; ORIGIN AND COMPOSITION OF METEORITIC AND TERRESTRIAL SAMPLES (A012014 X00); 12 MONTHS \$37,900

DOLLASE, WAYNE A, AND ERNST, W G; MOSSBAUER AND CRYSTAL STRUCTURE ANALYSES OF NATURAL AND SYNTHETIC ROCK-FORM-ING MINERALS (A012288); 24 MONTHS \$42,800

KNOPOFF, LEON: STOCHASTIC SEISMOLOGY (1031457\*); 24 MONTHS \$18,000

### UNIVERSITY OF CALIFORNIA, SAN DIEGO

GILBERT, FREEMAN, AND HAUBRICH, RICHARD A; OBSERVATIONS OF THE EARTH'S FREE MODES (A015914 001); 12 MONTHS \$60,000

LOVBERG, RALPH H, BERGER, JONATHAN, AND BRUNE, JAMES N; FIELD DEPLOYMENT OF LANER STRAIN METER (A025700 001); 12 MONTHS \$60.900

BRUNE, JAMES N. AND GILBERT, FREEMAN; EARTH STRUCTURE AND EARTHQUAKE SOURCE MECHANISM (A030765); 12 MONTHS \$70,000

### UNIVERSITY OF CALIFORNIA, SANTA BARBARA

TILTON, G. R; ISOTOPIC GEOCHEMISTRY OF LEAD AND STRONTIUM (A014478 001); 24 MONTHS \$50,000

CROWELL, JOHN C; EARLY DISPLACEMENT HISTORY OF THE SAN ANDREAS FAULT SYSTEM, SOUTHERN CALIFORNIA (A010901); 24 MONTHS \$50,000

### UNIVERSITY OF SOUTHERN CALIFORNIA

DAVIS, GREGORY A; THE STRUCTURAL DEVELOPMENT OF THE SOUTHERN CORDILLERAN OROGEN, CALIFORNIA (A021401 001); 24 MONTHS \$24,000

HENYEY, THOMAS L, PALMER, DONALD F, AND SMITH, TODD I; TO CONSTRUCT AND TEST A JOSEPHSON-EFFECT MAGNETOMETER FOR THE MEASUREMENT OF REMANENT MAGNETIZATION (AGJ1961); 12 MONTHS 44.500

UNIVERSITY OF CALIFORNIA, SAN DIEGO-SCRIPPS INSTITUTION OF OCEANOGRAPHY

ENGEL, ALBERT E J; NATURE, URIGIN AND EVOLUTION OF THE EARTH'S CRUST (ACMILLA XOO); 12 MONTHS \$30,200

UNIVERSITY OF CALIFORNIA, SAN DIEGO-REVELLE COLLEGE GOODKIND, JOHN M; WIDEBAND GRAVIMETRY WITH THE SUPER-CONDUCTING GRAVIMETER (A015985 002); 18 MONTHS \$43,400

### COLORADO

#### COLORADO SCHOOL OF MINES

KELLER, GEORGE V; ELECTROMAGNETIC SOUNDING OF THE CRUST AND UPPER MANTLE (A013134 003); 8 MONTHS \$3,600

### SOUTHERN COLORADO STATE COLLEGE

CHASE, R B; THE ROLE OF THE IDAHO BATHOLITH IN THE STRUCTURAL EVOLUTION OF NORTHWEST MONTANA (AGM3790); 24 MONTHS \$15.800

### UNIVERSITY OF COLORADO

FARRELL, W E, AND HARRISON, J C; FREE OSCILLATION AND EARTH TIDE STUDIES (A030549); 12 MONTHS \$19,200

BRADDOCK, WILLIAM A; DOCTORAL DISSERTATION RESEARCH IN GEOPHYSICS (A031986); 21 MONTHS \$3,400

LARSON, EDWIN E; DOCTORAL DISSERTATION RESEARCH IN GEOPHYSICS (A0331417); 24 MONTHS \$3,500

WALKER, THEODORE R: DIAGENETIC ALTERATIONS IN FIRST-CYCLE NON-MARINE SANDSTONES (A033560); 24 MONTHS \$37,100

### CONNECTICUT

### YALE UNIVERSITY

WAAGE, KARL M; PALEONTOLOGICAL EVIDENCE ON THE CHANGES IN THE EARTH'S MOMENT OF INERTIA SINCE EARLY PROTEROZOIC (AGJ1233); 12 MONTHS \$22,000

### DISTRICT OF COLUMBIA

### CARNEGIE INSTITUTION OF WASHINGTON

CHAYES, FELIX, DEVELOPMENT OF A PUBLICLY AVAILABLE ELECTRONIC LIBRARY OF ROCK ANALYSES (AGJI201): 12 MONTHS \$18,800

SACKS, I SELWYN, AND LINDE, ALAN T; ANELASTICITY STUDIES IN THE UPPER MANTLE AND STRESS RELEASE OF EARTHQUAKES (A031869); 24 MONTHS \$49,000

### GEORGE WASHINGTON UNIVERSITY

MILTON, CHARLES; MINERALOGY AND PETROLOGY OF THE GREEN RIVER FORMATION OF UTAH, WYOMING AND COLORADO (A0041413 001); 24 MONTHS \$47,300

LEWIS, JOHN F; PETROCHEMISTRY AND PETROLOGY OF SOME WEST INDIAN IGNEOUS ROCKS (A029199 001); 12 MONTHS \$8,300

WASILEWSKI, PETER; PRELIMINARY EVALUATION OF THE MECHANICAL AND THERMAL ALTERATIONS IN DREDGED OCEAN BASALTS (A031830); 24 MONTHS \$28,800

### NATIONAL ACADEMY OF SCIENCES

BOVE, ALBERT N; SUPPORT OF THE U. S. NATIONAL COMMITTEE FOR GEOCHEMISTRY (CJ10158 003); 12 MONTHS \$13.100

NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL

ODISHAW, HUGH, SUPPORT OF THE GEOPHYSICS RESEARCH BOARD AND ITS AFFILIATES (CJ10019 009\*); 12 MONTHS \$101,175

HEINDL, L A; U. S. NATIONAL COMMITTEE FOR THE INTERNA-TIONAL HYDROLOGICAL DECADE (CJIOIS) 005\*1; 12 MONTHS \$99,000 ROVE ALBERT N- TASK ORDER FOR PARTIAL SUPPORT OF THE U.S.

BOVE, ALBERT N; TASK ORDER FOR PARTIAL SUPPORT OF THE U.S. NATIONAL COMMITTEE FOR KOCK MECHANICS (C310159 003); 12 MONTHS \$14,000

## FLORIDA

## FLORIDA STATE UNIVERSITY

CRAMER, FRITZ H; SILURIAN PALYNOMORPHS OF KENTUCKY AND TENNESSEE (A030879); 12 MONTHS \$4,900

HARPER, CHRISTOPHER T, AND ODOM, A LEROY JR; POTASSIUM-AR.
GON, RUBIDIUM-STRONTIUM AND URANIUM LEAD ISOTOPE STUDIES
IN THE BLUE RIDGE AND INNER PIEDMONT, SOUTHERN APPALACHIANS (A031359); 24 MONTHS \$22,600

### UNIVERSITY OF SOUTH FLORIDA

HUANG, WEN HSING; THE INFLUENCE OF ORGANIC MATTER ON ALTERATION OF CLAY MINERALS (A033558); 24 MONTHS \$19,000

# UNIVERSITY OF MIAMI-SCHOOL OF MARINE AND ATMOSPHERIC SCIENCES

BONATTI, ENRICO, HARRISON, C G A, AND BALL, MAHLON M; GEOLOGICAL AND GEOPHYSICAL FIELD TRIP TO THE AFAR DEPRESSION, ETHIOPIA (Accesses coi); \$2,500

NAGLE, FREDERICK, AND STIPP, JERRY J. REGIONAL SRATIAS VARIA-TIONS AND KIAR AGE DISTRIBUTIONS. THE LESSER ANTILLES (A027121 001); 12 MONTHS \$25,400

GINSBURG, ROBERT N; EARLY SUBMARINE CEMENTATION OF REEFS (A019302 X01); \$5,000



GINSBURG, ROBERT N; EARLY SUBMARINE CEMENTATION OF REEFS (Acts see XCI), 12 WONTHS \$41,700

### GEORGIA

## GEORGIA INSTITUTE OF TECHNOLOGY

LONG, LELAND TIMOTHY; A STUDY OF MICROEARTHQUAKES IN THE SOUTHEASTERN UNITED STATES (A031989); 12 MONTHS \$16,800

### UNIVERSITY OF GEORGIA

MELTON, CHARLES E; THE ORIGIN OF DIAMONDS (A033357); 12 MONTHS \$20,000

#### HAWAII

#### UNIVERSITY OF HAWAIL

NAUGHTON, JOHN J; POTASSIUM-ARGON DATING OF HAWAIIAN YOL-CANICS (A001888 00%): 24 MONTHS \$40,100

WALKER, DANIEL A, AND SUTTON, GEORGE H; SEISMOLOGICAL IN-VESTIGATION OF THE WESTERN AND SOUTH PACIFIC UPPER MAN-TLE (401831 001); 12 MONTHS 464400

SUTTON, GEORGE H; LONG REFRACTION EXPERIMENT USING THE CANNIKIN NUCLEAR EXPLOSION AS A SOURCE (AGLIES); 6 MONTHS \$29.200

GABRELS, ROBERT M; WET SYNTHESIS OF SILICATES AT LOW TEM-PERATURES, AND PROPERTIES OF SEDIMENT-WATER SYSTEMS (A031038); & MONTHS \$11,500

WOOLLARD, GEORGE P; COOPERATIVE GEOPHYSICAL AND GEOLOGI-CAL INVESTIGATION OF THE ANDEAN REGION OF SOUTH AMERICA (A018185); 12 MONTHS \$30,000

### ILLINOIS

## NORTH WESTERN UNIVERSITY

SPEED, ROBERT C; PERMO-TRIASSIC CONTINENTAL MARGIN TEC-TONICS IN NEVADA AND CALIFORNIA (A088505 001); \$5,700

MACKENZIE, FRED T; DOCTORAL DISSERTATION RESEARCH IN GEOCHEMISTRY (AGJ1883); 24 MONTHS \$2,200

MACKENZIE, FRED T, EXPERIMENTAL CARBONATE DIAGENESIS (AGJ#1#0); 24 MONTHS \$45,000

### SOUTHERN ILLINOIS UNIVERSITY - CARBONDALE

COMEN, ARTHUR D; GEOLOGY OF THE PEATS OF THE OKEFENOKEE SWAMP (A013884 001); 24 MONTHS \$46,800

### UNIVERSITY OF CHICAGO

MOORE, PAUL B; SYSTEMATIC ANALYSIS OF ATOMIC ARRANGE-MENTS IN MINERALS (A010932 001); 24 MONTHS \$82,000

HAPNER, STEFAN S, INFRARED ABSORPTION, NUCLEAR MAGNETIC RESONANCE AND MOSSBAUER EFFECT APPLIED TO MINERALOGY (A014)11 001); 24 MONTHS \$50,000

JAMIESON, JOHN C; THE PHYSICAL BEHAVIOR OF SOLIDS UNDER VERY HIGH PRESSURE (A016875 001); 24 MONTHS \$79,600

WYLLIE, PETER J: ORIGIN OF PLUTONIC IGNEOUS ROCK SERIES (A019144 001); 12 MONTHS \$35,100

WYLLIE. PETER J; PETROGENETIC LINKS BETWEEN CAR-BONATITES AND KIMBERLITES (AGJ2246 X00); 12 MONTHS \$23,000

CLAYTON, ROBERT N, AND SMITH, JOSEPH V; CHEMICAL AND ISOTOPE ANALYSIS WITH AN ION MICROPROBE (Addition): 12 MONTHS 884 700

### UNIVERSITY OF ILLINOIS AT URBANA

STEVENSON, F J; BIOGEOCHEMISTRY OF NITROGEN (A015707 001); 24 MONTHS \$35,000

## AHAIDH

## INDIANA UNIVERSITY, BLOOMINGTON

DODD, J ROBERT; PALEOECOLOGY OF THE MARINE PLIOCENE OF THE PACIFIC COAST (AGGSTS); 24 MONTHS \$30,000

### PURDUE UNIVERSITY

ROY, ROBERT F; HEAT FLOW STUDIES OF CRUST AND MANTLE IN NORTHWESTERN MEXICO (Acide): 24 MONTHS \$29,000

KULLERUD, GUNNAR; PURCHASE OF EQUIPMENT FOR PHASE RELATIONS IN SULFIDE TYPE SYSTEMS (AGJ1727); 12 1 NTHS \$45,000

TAYLOR, LAWRENCE A, AND MEYER, HENRY O PHASE RELA-TIONS IN SULFIDE AND SILICATE SYSTEMS (AGJING); 24 MONTHS \$46,000

LOW, PHILIP F; RELATION BETWEEN THE CRYSTAL-LATTICE DIMENSIONS OF MONTMORILLONITE AND THE PROPERTIES OF THE ASSOCIATED WATER (A032441): 24 MONTHS \$50,000

### KANSAS

### UNIVERSITY OF FANSAS

VAN SCHMUS, W R; MIDDLE PRECAMBRIAN CRUSTAL EVOLUTION IN THE PENOKEAN FOLD BELT SUBPROVINCE, WISCONSIN AND UPPER MICHIGAN (A015851 001); 24 MONTHS \$37,000

### LOUISIANA

#### GRAMBLING COLLEGE

SABU, DWARKA D; THE STUDY OF NOBLE GAS ANGMALIES IN THE TERRESTRIAL ORE SAMPLES (AGGGGG); 18 MONTHS \$7,600

#### MAINE

#### UNIVERSITY OF MAINE, ORONO

GREEN, E JEWETT; PREDICTIVE THERMODYNAMIC MODELS FOR MINERAL SYSTEMS AND THEIR GEOLOGICAL APPLICATIONS (AGIGG); 84 MONTHS \$16,000

### MARYLAND

#### JOHNS HOPKINS UNIVERSITY

EUGSTER, HANS P; CONTROL OF PH IN HYDROTHERMAL ENVIRON-MENTS (A001101 001): 28 MONTHS \$68,800

HARDIE, LAWRENCE A, AND EUGSTER, HANS P; SEDIMENTARY EN-VIRONMENT OF MARINE EVAPORITES (AGS1076): 24 MONTHS \$60,000

### NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION

HESS, WILMOT N; FOREIGN STANDARD SEISMOLOGICAL STATIONS AND RELATED SEISMOLOGICAL DATA CENTER ACTIVITIES (AGOODS 001): 12 MONTHS \$223,500

### MASSACHUSETTS

### HARVARD UNIVERSITY

THOMPSON, JAMES B JR, AND KLEIN, CORNELIS JR; COEXISTING MINERALS IN METAMORPHIC ROCKS (ADILISS 001); 24 MONTHS \$82,700 BURNHAM, CHARLES W; CRYSTAL CHEMISTRY OF SILICATES (ADISSES 003); 24 MONTHS \$15,700

SIEVER, RAYMOND; PETROLOGY AND GEOCHEMISTRY OF FINE-GRAINED SILICEOUS SEDIMENTS (A01888 009); 21 MONTHS \$37,500 SHANKLAND, T J; SYNTHETIC FORSTERITE FOR GEOPHYSICAL

RESEARCH (A031090); 12 MONTHS \$23,500

DZIEWONSKI, ADAM M; INVESTIGATION OF THE PROPERTIES OF THE EARTH INTERIOR BY MEANS OF OBSERVATION OF SURFACE WAVES AND FREE OSCILLATIONS (A031310); 24 MONTHS \$55,000

### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

CHUNG, D. H., AND SIMMONS, GENE; GEOPHYSICAL PROPERTIES OF POSSIBLE EARTH MANTLE MATERIALS (AD11091 001); 24 MONTHS \$17,100 FREY, FREDERICK A; PHASE EQUILIBRIA OF BIOTITES AND AMPHIBOLES (A013092 001); 12 MONTHS \$28,500

ANI, KEIITI; GLOBAL TECTONIC SYNTHESIS FROM THE SPECTRAL ANALYSIS OF EARTHQUAKE SURFACE WAVES (A014:12 001); 24 MONTHS \$75,000

SHAPIRO, IRWIN I; GEOPHYSICAL APPLICATIONS OF ATOMIC-CLOCK RADIO INTERFEROMETRY (A015114 001); 12 MONTHS \$58,000

BURNS, ROGER G; THE MOSSBAUER EFFECT IN MINERALS AT ELEVATED PRESSURES (A088008 X01); \$20,000

BURNS, ROGER G; THE MOSSBAUER EFFECT IN MINERALS AT ELEVATED PRESSURES (A028904 X02); 12 MONTHS \$40,000

SOUTHARD, JOHN B; GLACIER HYDRAULICS (A031489); 24 MONTHS \$31,100

MCGETCHIN, THOMAS R; DIATREME STUDIES (AGGITES); 24 MONTHS 251,000

HURLEY, PATRICK M, AND FAIRBAIRN, HAROLD W; RADIOMETRIC AGE DATING OF PRECAMBRIAN ROCKS AND JOIDES CORES (A031878); 12 MONTHS \$37,100

WALSH, JOSEPH B; INTERNAL STRESS IN POLYCRYSTALLINE ROCK (A031900); 24 MONTHS \$41,000

### UNIVERSITY OF MASSACHUSETTS, AMHERST

MORSE, STEARNS A; GEOCHEMICAL STUDIES IN THE KICLAPAIT LAYERED INTRUSION AND NAIN ANORTHOSITE COMPLEX, LABRADOR (AG1141): 12 MONTHS \$4.600

HUBERT, JOHN F; SEDIMENTOLOGY OF THE CAMBRO-ORDOVICIAN COW HEAD GROUP, NORTHWESTERN NEWFOUNDLAND (AM1870); 24 MONTHS \$25,400

JAFFE, HOWARD W, AND ROBINSON, PETER; PHASE RELATIONS IN METAMORPHIC ROCKS OF CENTRAL MASSACHUSETTS AND THE CEN-TRAL ADIRONDACKS (A0J1088); 24 MONTHS \$48,400

Morse, S A; evolution of anorthosite and related crustal rocks in coastal labrador (Agress); 24 months \$60,000

ROBINSON, PETER; STRATIGRAPHY AND STRUCTURE OF NAPPES AND GNEISS DOMES OF THE BRONSON HILL ANTICLINORIUM AND MERRIMACK SYNCLINORIUM, WEST-CENTRAL MASSACHUSETTS (AG1337); 24 MONTHS \$30,600

## williams college

BOND, GERARD C; SEDIMENTATION, PALEOGEOGRAPHY, AND PALEOTECTONICS OF UPPER PALEOZOIC STRATA IN THE EASTERN ALASKA RANGE, ALASKA (AGJICIT); 24 MONTHS \$28,100



### MICHIGAN

### ADRIAN COLLEGE

MADOLE, R F. AND BACHHUBER, F W; STRATIGRAPHIC AND PA-LYNOLOGIC STUDY OF FORMER ICE-MARGINAL LAKES AND A RADIOCARBON CORRELATION OF STADES OF PINEDALE GLACIATION IN BOULDER COUNTY, COLORADO (A049137 001); \$4,275

MADOLE, R F, AND BACHHUBER, F W; STRATIGRAPHIC AND PA-LYNOLOGIC STUDY OF FORMER ICE-MARGINAL LAKES AND RADIOCARBON CORRELATION OF STADES OF PINEDALE GLACIATION IN BOULDER COUNTY, COLORADO (A018131 004); \$800

### UNIVERSITY OF MICHIGAN

KELLY. WILLIAM C: FLUID INCLUSIONS IN TIN-TUNGSTEN YEINS (A019054 X01); 12 MONTHS \$35,200

DORR. JOHN A JR: FOSSIL VERTEBRATE INTERCONTINENTAL FAU-RELATIONSHIPS AND PLATE TECTONICS, DEVONIAN-CRETACEOUS (A0J07J0); 12 MONTHS \$22,300

#### MINNESOTA

### UNIVERSITY OF MINNESOTA

SAWKINS, FREDERICK J; FLUID INCLUSION STUDIES RELATED TO ORE GENESIS IN POSTMAGMATIC, METAMORPHIC AND SEDIMENTA. RY ENVIRONMENTS (A00 USS 008); 12 MONTHS \$24,900

HOOKE, ROCER LEB; GLACIOLOGICAL STUDIES ON THE BARNES ICE CAP, BAFFIN ISLAND, CANADA (A019110 002); 12 MONTHS \$20,000

BANERIEE, SUBIR K; STUDY OF REMANENCE IN FINE PARTICLES OF SYNTHESIZED (AND NATURAL) IRON TITANIUM OXIDES (AGJISDO); 12 MONTHS \$9,000

### MISSOURI

#### SOUTHWEST MISSOURI STATE COLLEGE

KURTZ, V E; CAMBRIAN-LOWER ORDOVICIAN PALEONTOLOGY. STRATIGRAPHY AND SEDIMENTOLOGY, BIGHORN MOUNTAINS, WYOM. ING (A001538 001); 12 MONTHS \$14,300

#### 81 LOUIS UNIVERSITY

STAUDER, WILLIAM; RESEARCH IN EARTH STRAINS AND FOCAL MECHANISMS (A013414 001); 24 MONTHS \$99,300

NUTTLI, OTTO W; SEISMOLOGICAL STUDIES RELATED TO THE EARTHQUAKE HAZARD PROBLEM IN THE CENTRAL AND EASTERN UNITED STATES (A0101 IS 001); 12 MONTHS \$40,000

VINCENZ, STANISLAW A; PALEOMAGNETIC INVESTIGATIONS OF HISPANIOLA (AGISLIS): 12 MONTHS \$19,700

## UNIVERSITY OF MISSOURI, COLUMBIA

HOSTETLER, PAUL B. AND BAUMAN, JOHN E; THERMODYNAMICS OF IONIC INTERACTIONS (AGJISSI); 24 MONTHS \$64,000

JOHNS, WILLIAM D. COMPLETION OF AN X-RAY DIFFRACTOMETER SYSTEM (A011140); 12 MONTHS \$5,500

### UNIVERSITY OF MISSOURI, ROLLA

MANUEL, OLIVER K; NOBLE GASES IN THE EARTH AND ITS AT-MOSPHERE (A01618 001); 24 MONTHS \$50,000

### MONTANA

### UNIVERSITY OF MONTANA

TALBOT, J L; THE ROLE OF THE IDAHO BATHOLITH IN THE STRUC-TURAL EVOLUTION OF NORTHWEST MONTANA (A033788); 24 MONTHS

### NEW JERSEY

### PRINCETON UNIVERSITY

PHINNEY, ROBERT A; MAGNETOTELLURIC EXPLORATION FOR CRUSTAL THERMAL ANOMALIES (A018267 001): 12 MONTHS \$31,000

KINSMAN, DAVID J J; PROCESSES CONTROLLING THE CHEMICAL COMPOSITIONS OF SURFACE AND SHALLOW GROUND WATERS (A011011); 24 MONTHS \$62,200

WALDBAUM, DAVID R; CALORIMETRIC INVESTIGATION OF THE THERMODYNAMIC PROPERTIES OF MINERALS (ADJIES): 24 MONTHS

MORGAN, W JASON; THEORETICAL STUDIES IN PLATE TECTONICS (A031364); 24 MONTHS \$60,300

BONINI, WILLIAM E: ANALYSIS OF GRAVITY ANOMALIES SOUTHERN MARGIN OF THE CARIBBEAN SEA IN VENEZUELA (A03/477); 24 MONTHS \$44,700

HOLLAND, H D; PLANNING CONFERENCE ON MINERAL EXPLORA-TION (A032143); 12 MONTHS \$7,000

SUPPE, JOHN: FECTONIC DEVELOPMENT AND PROGRESSIVE METAMORPHISM OF THE FRANCISCAN TERRAIN, CALIFORNIA (A013334); 24 MONTHS \$31,900

### **NEW MEXICO**

## NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY

SANFORD, ALLAN R; DETERMINATION OF CRUSTAL STRUCTURE IN THE RIO GRANDE RIFT ZONE (A030747); 12 MONTHS \$10,900

### UNIVERSITY OF NEW MEXICO

ANDERSON, ROGER Y; CLIMATIC CYCLES AND PATTERNS IN VARYEU SEDIMENTS-CASTILE PROJECT (A014515 001); 12 MONTHS \$35,100

BROOKINS, DOUGLAS G: RUBIDIUM - STRONTIUM GEOCHRONOLOGY (A011119); 12 MONTHS \$21,100

### **NEW YORK**

### COLUMBIA UNIVERSITY

KAY, MARSHALL: DUNNAGE MELANGE (NEWFOUNDLAND) AND THE PROTO-ATLANTIC PROBLEM (A015350 001); 12 MONTHS \$10,100

YPMA, PETER J M: DOCTORAL DISSERTATION RESEARCH IN GEOCHEMISTRY (A0JOSE4); 12 MONTHS \$3,600

KERR. PAUL F; THE ROLE OF CLAY MINERALS IN LANDSLIDES (A0/1801): 6 MONTHS \$5.200

### CORNELL UNIVERSITY

OLIVER, JACK; COLLABORATIVE RESEARCH ON THE DETAILED SEISMICITY OF THE ALPINE FAULT, NEW ZEALAND (ACCORDED); 24 MONTHS \$59,600

OLIVER, JACK; TECTONICS AND STRUCTURE OF THE TONGA ISLAND ARC (A030173); 24 MONTHS \$135,400

WHEELER, E P II: PETROLOGY OF NAIN ANORTHOSITE - ADAMEL-LITE COMPLEX (A014084); 24 MONTHS \$3,700

ISACKS, BRYAN L: SEISMOLOGICAL STUDIES OF THE DESCENT OF LITHOSPHERE INTO THE MANTLE (AOSITIO); 24 MONTHS \$75,000

### **NEW YORK UNIVERSITY**

BURRIDGE, ROBERT; ELASTICITY PROBLEMS IN SEISMOLOGY (A031870); 24 MONTHS \$50,000

### STATE UNIVERSITY AT ALBANY

WILLIAMS, P F, AND MEANS, W D; FOLDING AND FABRIC DEVELOP. MENT IN EXPERIMENTALLY DEFORMED SYNTHETIC MATERIALS (A015\$18 00\$); 24 MONTHS \$38,000

MIYASHIRO, AKIHO; STUDY OF IGNEOUS AND METAMORPHIC ROCKS OF THE OCEANIC REGION (Accords); 12 MONTHS \$40,000

BIRD, JOHN M, AND DEWEY, JOHN F; STUDIES OF OPHICLITE COM-PLEXES AND RELATED ROCKS IN THE NORTHERN APPALACHIANS (A033914); 24 MONTHS \$55,000

## STATE UNIVERSITY AT BINGHAMTON

VIDALE, ROSEMARY J: STUDY OF LOCALLY DERIVED VEIN MINERAL ASSEMBLAGES IN METAMORPHIC ROCKS (AGGGES); 24 MONTHS \$30,600

## STATE UNIVERSITY AT STONY BROOK

PAPIKE, JAMES J. AND PREWITT, CHARLES T; PHASE TRANSITIONS AND INTRACRYSTALLINE EQUILIBRIA IN PYROXENES AND AM. PHIBOLES (A012073 001); 24 MONTHS \$110,200

BENCE, ALFRED E; METAMORPHIC PETROGENESIS, DUTCHESS COUNTY, NEW YORK (A015638 001); 12 MONTHS \$20,000

GEBELEIN, CONRAD D. STRATIGRAPHY AND ECOLOGY OF RECENT SHALLOW MARINE CARBONATE SEDIMENTS, SOUTHWEST ANDROS ISLAND, BAHAMAS (A025215 001), 12 MONTHS \$31,000

HANSON, GILBERT N: EVOLUTION OF EARLY PRECAMBRIAN TER-RANE (A630747); 12 MONTHS \$20,900

CARTER, NEVILLE L; SOLID FLOW IN THE SARTH'S MANTLE (A031589); 24 MONTHS \$85,000

## SYRACUSE UNIVERSITY

GROSHONG, RICHARD H JR: TWINNED CALCITE AS A NATURAL STRAIN GAGE-VERIFICATION AND ACCURACY (Actions): 12 MONTHS \$10,500

DE WAARD, DIRK; PETROLOGY AND STRUCTURE OF ROCKS BOR-DERING ON ANORTHOSITE MASSES IN THE NAIN AREA, LABRADOR (A031875); 24 MONTHS \$35,000

## UNIVERSITY OF ROCHESTER

BASSETT, WILLIAM A. AND LIU, LIN-GUN; INVESTIGATION OF THE EFFECT OF PRESSURE ON THE MELTING OF IRON AND ITS ALLOYS (A0J1901); 12 MONTHS \$21,900

## COLUMBIA UNIVERSITY-LAMONT-DOHERTY GEOLOGICAL

OBSERVATORY

KAY, ROBERT W; DISPERSED ELEMENTS, LEAD AND STRONTIUM ISOTOPE COMPOSITIONS IN OCEANIC VOLCANIC ROCKS (A014137 001); 24 MONTHS \$47,200

EWING, MAURICE, AND NOWROOZI, ALI A: OCEAN BOTTOM PROJECT (A021478 001); 12 MONTHS \$50,800

SYKES, LYNN R, AND WYSS, MAX; A DETAILED STUDY OF THE REYKJANES PENINSULA, ICELAND- THE LANDWARD EXTENSION OF AN ACTIVELY SPREADING MID-OCEAN RIDGE (A099 405 001); 20 MONTHS \$68,000

SCHOLZ, CHRISTOPHER, AND OLIVER, JACK; THE DETAILED SEISMICITY OF THE ALPINE FAULT, NEW ZEALAND (ADJOSES); 24 MONTHS \$60,700

EWING, MAURICE, AND KUO, JOHN T; SOLID-EARTH TIDE STUDIES IN U.S.A. AND WESTERN EUROPE (Adjosof), 12 MONTHS \$38,000

### MICHIGAN

### ADRIAN COLLEGE

MADOLE, R.F., AND BACHHUBER, F.W.; STRATIGRAPHIC AND PALLYNOLOGIC STUDY OF FORMER ICE-MARGINAL LAKES AND A RADIOCARBON CORRELATION OF STADES OF PINEDALE GLACIATION IN BOULDER COUNTY, COLORADO (Aces 147 001); \$4.275

MADOLE, R F. AND BACHRUBER, F W; STRATIGRAPHIC AND PA-LYNOLOGIC STUDY OF FORMER ICE-MARGINAL LAKES AND A RADIOCARBON CORRELATION OF STADES OF PINEDALE GLACIATION IN BOULDER COUNTY, COLORADO (A019137 001); \$800

### UNIVERSITY OF MICHIGAN

RELLY, WILLIAM C: FLUID INCLUSIONS IN TINTUNGSTEN VEINS (A000054 X01); 12 MONTHS \$35,200

DORR, JOHN A JR; FOSSIL VERTEBRATE INTERCONTINENTAL FAU. RELATIONSHIP3 AND PLATE TECTONICS. DEVONIAN. CRETACEOUS (A030730), 12 MONTHS \$22,300

### UNIVERSITY OF MINNESOTA

SAWKINS, FREDERICK J; FLUID INCLUSION STUDIES RELATED TO ORE GENESIS IN POSTMAGMATIC, METAMORPHIC AND SEDIMENTA. RY ENVIRONMENTS (A00 LISS 002); 12 MONTRS \$24,900

ROOKE, ROOER LEB; GLACIOLOGICAL STUDIES ON THE BARNES ICE CAP, BAFFIN ISLAND, CANADA (A019310 008); 12 MONTHS \$20,000

BANERIBE, SUBIR K; STUDY OF REMANENCE IN FINE PARTICLES OF SYNTHESIZED (AND NATURAL) IRON TITANIUM OXIDES (AGJ189); 12 MONTHS \$9,000

### MISSOURI

### SOUTHWEST MISSOURI STATE COLLEGE

KURTZ, V E; CAMBRIAN-LOWER ORDOVICIAN PALEONTOLOGY. STRATIGRAPHY AND SEDIMENTOLOGY, BIGHORN MOUNTAINS, WYOM. ING (A001558 001); 12 MONTHS \$14,300

### ST LOUIS UNIVERSITY

STAUDER, WILLIAM; RESEARCH IN EARTH STRAINS AND FOCAL MECHANISMS (A015814 001); 24 MONTHS \$99,300

NUTTLI, OTTO W; SEISMOLOGICAL STUDIES RELATED TO THE BARTHQUAKE HAZARD PROBLEM IN THE CENTRAL AND BASTERN UNITED STATES (A020115 001): 12 MONTHS \$40,000

VINCENZ, STANISLAW A; PALEOMAGNETIC INVESTIGATIONS OF HISPANIOLA (AGISLUS): 12 MONTHS \$19,700

## UNIVERSITY OF MISSOURI, COLUMBIA

HOSTETLER, PAUL B, AND BAUMAN, JOHN E; THERMODYNAMICS OF IONIC INTERACTIONS (A03/231); 24 MONTHS \$64,000

JOHNS, WILLIAM D: COMPLETION OF AN X-RAY DIFFRACTOMETER

SYSTEM (A031760); 12 MONTHS \$5,500

## UNIVERSITY OF MISSOURI, ROLLA

MANUEL, OLIVER K; NOBLE GASES IN THE EARTH AND ITS AT-MOSPHERE (A016618 001); 24 MONTHS \$50,000

### MONTANA

### UNIVERSITY OF MONTANA

TALBOT, & L; THE ROLE OF THE IDAHO BATHOLITH IN THE STRUC-TURAL EVOLUTION OF NORTHWEST MONTANA (A033788); 24 MONTHS \$30,000

### **NEW JERSEY**

### PRINCETON UNIVERSITY

PHINNEY, ROBERT A: MAGNETOTELLURIC EXPLORATION FOR CRUSTAL THERMAL ANOMALIES (A018267 0011; 12 MONTHS \$31,000

KINSMAN, DAVID J J; PROCESSES CONTROLLING THE CHEMICAL COMPOSITIONS OF SURFACE AND SHALLOW GROUND WATERS (A01041); 24 MONTHS \$62,200

WALDBAUM, DAVID R; CALORIMETRIC INVESTIGATION OF THE THERMODYNAMIC PROPERTIES OF MINERALS (A011163); 24 MONTHS \$77,400

MORGAN, W JASON; THEORETICAL STUDIES IN PLATE TECTONICS (A031364); 24 MONTHS \$60,300

BONINI, WILLIAM E; ANALYSIS OF GRAVITY ANOMALIES -SOUTHERN MARGIN OF THE CARIBBEAN SEA IN VENEZUELA (A031877); 24 MONTHS \$44,700

HOLLAND, H D; PLANNING CONFERENCE ON MINERAL EXPLORA-TION (AMERICA); 12 MONTHS \$7,000

SUPPE, JOHN; TECTONIC DEVELOPMENT AND PROGRESSIVE METAMORPHISM OF THE FRANCISCAN TERRAIN, CALIFORNIA (A649554), 24 MONTHS \$31,900

### NEW MEXICO

### NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY

SANFORD. ALLAN R: DETERMINATION OF CRUSTAL STRUCTURE IN THE RIO GRANDE RIFT ZONE (A030747); 12 MONTHS \$10,900

### UNIVERSITY OF NEW MEXICO

ANDERSON, ROGER Y; CLIMATIC CYCLES AND PATTERNS IN VARVED SEDIMENTS-CASTILE PROJECT (A013313 001); 12 MONTHS \$35,100

BROOKINS, DOUGLAS G; RUBIDIUM - STRONTIUM GEOCHRONOLOGY (A011149); 12 MONTHS \$21,100

#### **NEW YORK**

### COLUMBIA UNIVERSITY

KAY, MARSHALL; DUNNAGE MELANOE (NEWFOUNDLAND) AND THE PROTO-ATLANTIC PROBLEM (AGISSO 001); 12 MONTHS \$10.100

YPMA, PETER J M; DOCTORAL DISSERTATION RESEARCH IN GEOCHEMISTRY (A0JOSSI), 12 MONTHS \$3,600

KERR, PAUL F; THE ROLE OF CLAY MINERALS IN LANDSLIDES (A03/801); 6 MONTHS \$5,500

#### CORNELL UNIVERSITY

OLIVER, JACK; COLLABORATIVE RESEARCH ON THE DETAILED SEISMICITY OF THE ALPINE FAULT, NEW ZEALAND (ACCOUSE); 24 MONTHS \$59,600

OLIVER, JACK; TECTONICS AND STRUCTURE OF THE TONGA ISLAND ARC (A050474); 24 MONTHS \$135,400

WHEELER, E P II; PETROLOGY OF NAIN ANORTHOSITE - ADAMEL. LITE COMPLEX (A031024); 24 MONTHS \$3,700

ISACKS, BRYAN L; SEISMOLOGICAL STUDIES OF THE DESCENT OF LITHOSPHERE INTO THE MANTLE (AGS \$140); 24 MONTHS \$75,000

### NEW YORK UNIVERSITY

BURRIDGE, ROBERT; ELASTICITY PROBLEMS IN SEISMOLOGY (A031570); 24 MONTHS \$50,000

### STATE UNIVERSITY AT ALBANY

WILLIAMS, P F, AND MEANS, W D; FOLDING AND FABRIC DEVELOP. MENT IN EXPERIMENTALLY DEFORMED SYNTHETIC MATERIALS (A015918 008); 24 MONTHS \$38,000

MIYASHIRO, AKIHO; STUDY OF IONEOUS AND METAMORPHIC ROCKS OF THE OCEANIC REGION (ACCOPTE): 12 MONTHS \$40,000

BIRD, JOHN M, AND DEWEY, JOHN F; STUDIES OF OPHICLITE COM. PLEXES AND RELATED ROCKS IN THE NORTHERN APPALACHIANS (AGJJ#14): 24 MONTHS \$56,000

### STATE UNIVERSITY AT BINGHAMTON

VIDALE, ROSEMARY J; STUDY OF LOCALLY DERIVED VEIN MINERAL ASSEMBLAGES IN METAMORPHIC ROCKS (A030561); 24 MONTHS \$30,600

## STATE UNIVERSITY AT STONY BROOK

PAPIKE, JAMES J, AND PREWITT, CHARLES T, PHASE TRANSITIONS AND INTRACRYSTALLINE EQUILIBRIA IN PYROXENES AND AM-PHIBOLES (A012913 001); 24 MONTHS \$110,200

BENCE, ALFRED E; METAMORPHIC PETROGENESIS, DUTCHESS COUNTY, NEW YORK (A015638 001); 12 MONTHS \$20,000

GEBELEIN, CONRAD D; STRATIGRAPHY AND ECOLOGY OF RECENT SHALLOW MARINE CARBONATE SEDIMENTS, SOUTHWEST ANDROS ISLAND, BAHAMAS (A022435 001); 12 MONTHS \$31,000

HANSON, GILBERT N; EVOLUTION OF EARLY PRECAMBRIAN TER-RANE (A030717); 12 MONTHS \$20,900

CARTER, NEVILLE L; SOLID FLOW IN THE EARTH'S MANTLE (A011569); 24 MONTHS \$85,000

## SYRACUSE UNIVERSITY

GROSHONG, RICHARD H JR; TWINNED CALCITE AS A NATURAL STRAIN GAGE-VERIFICATION AND ACCURACY (A031094); 18 MONTHS \$10,500

DE WAARD, DIRK; PETROLOGY AND STRUCTURE OF ROCKS BOR-DERING ON ANORTHOSITE MASSES IN THE NAIN AREA, LABRADOR (A031873); 24 MONTHS \$35,000

### UNIVERSITY OF ROCHESTER

BASSETT, WILLIAM A. AND LIU, LIN-GUN; INVESTIGATION OF THE EFFECT OF PRESSURE ON THE MELTING OF IRON AND ITS ALLOYS (A0J1904); 12 MONTHS \$21,900

#### COLUMBIA UNIVERSITY-LAMONT-DOHERTY GEOLOGICAL OBSERVATORY

KAY, ROBERT W. DISPERSED ELEMENTS, LEAD AND STRONTIUM ISOTOPE COMPOSITIONS IN OCEANIC VOLCANIC ROCKS (A016457 OOD); 24 MONTHS \$47,200

EWING, MAURICE, AND NOWROOZI, ALI A: OCEAN BOTTOM PROJECT (A021473 001); 12 MONTHS \$50,800

SYKES, LYNN R, AND WYSS, MAX; A DETAILED STUDY OF THE REYKJANES PENINSULA, ICELAND- THE LANDWARD EXTENSION OF AN ACTIVELY SPREADING MID-OCEAN RIDGE (A000 403 001); 20 MONTHS 168,000

SCHOLZ, CHRISTOPHER, AND OLIVER, JACK; THE DETAILED SEISMICITY OF THE ALPINE FAULT, NEW ZEALAND (A030383); 24 MONTHS \$60,700

EWING, MAURICE, AND KUO, JOHN T; SOLID-EARTH TIDE STUDIES IN U.S.A. AND WESTERN EUROPE (ACJOSET); 12 MONTHS \$38,000

BROECNER, WALLACE 8; DOCTORAL DISSERTATION RESEARCH IN GEOCHEMISTRY (AGJIEGS); 18 MONTHS \$2,600

OPDYKE, NEIL D. MAGNETIC STRATIGRAPHY, CORRELATION AND ABSOLUTE AGE OF PLIOCENE-PLEISTOCENE TERRESTRIAL SEDI-MENTS IN THE SOUTHERN BASIN AND RANGE PROVINCE (A031555); 24 MONTHS \$30,500

RICHARDS, PAUL G: INVESTIGATION OF PULSE DEFORMATION IN SEISMIC BODY WAVES (A034109); 24 MONTHS \$39,700

HAYS, JAMES D; CONFERENCE ON THE EXTINCTION OF ANIMAL LIFE IN THE GEOLOGIC PAST (ACQUIS); 6 MONTHS \$4,600

#### **NORTH DAKOTA**

### UNIVERSITY OF NORTH DAKOTA

TING, FRANCIS T C; PETROGRAPHIC CHARACTERIZATION OF LOW-RANK COALS OF NORTH CENTRAL UNITED STATES (AMIESO); 24 MONTHS \$34,900

#### CHIO

### CASE WESTERN RESERVE UNIVERSITY

NAIRN, ALAN E M; PALEOMAGNETIC INVESTIGATION OF MESOZOIC ROCKS (A030744): 24 MONTHS \$39,800

#### OHIO STATE UNIVERSITY

FAURE, GUNTER; DOCTORAL DISSERTATION RESEARCH IN GEOCHEMISTRY (A030063): 24 MONTHS 14,000

#### OKLAHOMA

#### NORTHBASTERN STATE COLLEGE

REED, LANNY JOE; ORIENTATION OF PARTICLES EMBEDDED IN A VISCOUS EATRIX AS THE MATRIX IS DEFORMED (A030770); 12 MONTHS 111300

### UNIVERSITY OF OKLAHOMA

DUBOIS, ROBERT L; STUDIES OF SECULAR VARIATION BY ARCHEOMAGNETIC METHODS (A0J4110); 12 MONTHS \$25,000

### OREGON

#### **OREGON STATE UNIVERSITY**

JOHNSON, J GRANVILLE; A STANDARD BIOSTRATIGRAPHIC SEQUENCE FOR THE DEVONIAN IN WESTERN NORTH AMERICA (A017617 001): 24 MONTHS \$40,000

HARWARD, M. E; CLAYS IN VOLCANIC ASH DEPOSITS FROM MT. MAZAMA, OREGON (Abjiles); 24 MONTHS \$30,000

TAUBENECK, WILLIAM H; GRANITIC ROCKS IN THE MESOZOIC EVOLUTION OF THE PACIFIC NORTHWEST (A031852); 24 MONTHS \$29,200

### UNIVERSITY OF OREGON - EUGENE

GOLES, GORDON G, AND BAKER, BRIAN H; GEOCHEMICAL, PETROGENETIC AND VOLCANO-TECTONIC STUDIES OF THE AL-KALINE VOLCANIC ROCKS OF THE KENYAN RIFT (ANJIJJ); 24 MONTHS 858,000

GOLES, GORDON G; COMPOSITIONAL VARIATIONS IN COLUMBIA RIVER BASALTS AND RELATED ROCKS (AGJIST X00), 12 MONTHS \$33,700

### **PENNSYLVANIA**

### FRANKLIN AND MARSHALL COLLEGE

MORSE, S A; EVOLUTION OF ANORTHOSITE AND RELATED CRUSTAL ROCKS IN COASTAL LABRADOR (A021)26 001), 12 800

BEUTNER, EDWARD C; ONSHORE GEOLOGIC EVIDENCE OF CRUSTAL PLATE MOVEMENTS, CAPE MENDOCINO AREA CALIFORNIA (AUGILIE); 24 MONTHS \$33,500

## LEHIGH UNIVERSITY

PARKS, J M; DOCTORAL DISSERTATION RESEARCH- BIOSTRATI-GRAPHIC AND EVOLUTIONARY STUDY OF CONDONTS FROM THE TYPE CHAZY (MIDDLE ORDOVICIAN) OF NEW YORK AND VERMONT (AUGUSTS); 12 MONTHS \$1.250

### PENNSYLVANIA STATE UNIVERSITY

BOETTCHER, ARTHUR L; HIGH-PRESSURE HYDROTHERMAL PHASE TRANSFORMATIONS AND THE GENERATION OF MAGMAS (A012747 001); 24 MONTHS \$40,100

SPACKMAN, WILLIAM; THE CHARACTERISTICS OF MODERN OR-GANIC SEDIMENTS AND THEIR USE IN THE IDENTIFICATION, DESCRIPTION AND INTERPRETATION OF CARBONACIOUS ROCKS AND ROCK SEQUENCES (A028961 001); \$5,200

BURNHAM, C WAYNE; P.V.T.X RELATIONS IN THE SYSTEM HAD-NACL TO 10 KILOBARS AND 1000 DEGREES C (A011041); 18 MONTHS 872 200

WEBER, JON N; GEOCHEMICAL STUDIES OF CARBONATES FROM CORAL REEF ENVIRONMENTS (ADJILIT); 24 MONTHS \$23,000

DEINES, P. EXPERIMENTAL DETERMINATION OF OXYGEN ISOTOPE FRACTIONATIONS BETWEEN MAGNETITE AND QUARTZ AND BETWEEN MAGNETITE AND SANIDINE (A011781); 24 MONTHS \$22,000

OHMOTO, HIROSHI; SULFUR ISOTOPIC EQUILIBRIA IN HYDROTHER-MAL SYSTEMS (AGJ1901); 24 MONTHS \$30,600

### UNIVERSITY OF PENNSYLVANIA

RALPH, ELIZABETH K; C-14 MEASUREMENTS OF KNOWN AGE SAM-PLES (A018312 001): 24 MONTHS \$46,100

### UNIVERSITY OF PITTSBURGH

FULLER, M, ITO, HARUAKI, AND SCHMIDT, VICTOR A: PALEGMAGNETIC STUDIES OF REVERSALS OF THE EARTH'S MAGNETIC FIELD (A013135 001): 24 MONTHS \$49,500

FULLER, M. ITO, HARUAKI, AND SCHMIDT, VICTOR A; PALEOMAGNETIC STUDIES OF REVERSALS OF THE EARTH'S MAGNETIC FIELD (A013135 001); 12 MONTHS \$500

BIKERMAN, MICHAEL: KAR DATING OF VOLCANIC ROCKS IN SOUTHWESTERN NEW MEXICO (A018004 001); 12 MONTHS \$7,800

CASSIDY, WILLIAM A: FIELD STUDIES AT CAMPO DEL CIELO, AR-GENTINA (A03/829): 12 MONTHS \$9,700

ROLLINS, HAROLD B, AND DONAHUE, JACK; MARINE CYCLES AND SYMMETRY (A031888): 24 MONTHS \$41,400

#### RHODE ISLAND

### BROWN UNIVERSITY

GILETTI, BRUNO J; NATURAL AND ARTIFICIALLY INDUCED ISOTOP-IC AGE DISCORDANCES IN MINERALS (ASSIGN SOS): 12 MONTHS \$34,700 CHAPPLE, WILLIAM M; MECHANICS OF STRESS TRANSMISSION ACROSS A FOLD AND THRUST BELT (ASSIGN SOS): 24 MONTHS \$34,200

MATTHEWS, R K; CARBONATE DIAGENESIS WITH SPECIAL EMPHA-SIS ON THE PLEISTOCENE OF BARBADOS, WEST INDIES (ACREICS SOI); 24 MONTHS \$47,500

IMBRIE, JOHN; PALEOECOLOGY OF THE OCEANIC FORMATION (A028755 001); 15 MONTHS \$11,300

HESS, PAUL C; SOLUTION THEORIES OF SILICATE MELTS (AGGITES); 24 MONTHS \$11,500

HERMANCE, JOHN F; MAGNETOTELLURIC AND TELLURIC STUDIES AT MICROPULSATION PERIODS ON THE AZORES (A031444); 12 MONTHS \$19,100

TULLIS, TERRY E; RELATIONSHIP BETWEEN FINITE STRAIN AND PREFERRED ORIENTATION IN SLATE (A033553); 24 MONTHS \$19,900

### UNIVERSITY OF RHODE ISLAND

WATKINS, N.D., PURCHASE AND OPERATION OF A SUPERCONDUCTING ROCK MAGNETOMETER (AQLILL), 12 MONTHS \$16,000

# UNIVERSITY OF RHODE ISLAND-GRADUATE SCHOOL OF OCEANOGRAPHY

KENNETT, JAMES P, AND WATKINS, NORMAN D; PALEOMAGNETIC POLARITY HISTORY AND BIOSTRATIGRAPHY OF SELECTED UPPER TERTIARY-QUATERNARY MARINE SEQUENCES IN NEW ZEALAND (A027092 001); 12 MONTHS \$30,300

### SCOTLAND

### UNIVERSITY OF EDINBURGH

ARNOLD, E P; THE INTERNATIONAL SEISMOLOGICAL CENTRE (A018292 002); 12 MONTHS \$37,500

### SOUTH CAROUNA

### CLEMSON UNIVERSITY

GRIFFIN, VILLARD S JR; ANALYSIS OF THE STRUCTURAL, PETROLOGIC AND STRATIGRAPHIC INTERRELATIONSHIPS BETWEEN THE INNER PIEUMONT, KINGS MOUNTAIN, CHARLOTTE AND CARGLINA SLATE BELTS IN SOUTH CARGLINA (A016164 001); 18 MONTHS \$20,100

### UNIVERSITY OF SOUTH CAROLINA

CONOLLY, JOHN R, KANES, WILLIAM H, AND FERM, JOHN C; INITIAL RIFTING OF EUROPE AND AFRICA AND GROWTH AND FOLDING OF THE JURASSIC ATLAS SEA, MOROCCO (FO22310 X00\*); 36 MONTHS \$20,000

### **TEXAS**

### RICE UNIVERSITY

BURCHFIEL, B.C. STRUCTURAL DEVELOPMENT OF THE SOUTHERN CORDILLEPAN OROGEN (A021375 001); 24 MONTHS \$29,200

CLARK, H C; PALEOMAGNETISM AND THE EVOLUTION OF MIDDLE AMERICA --- A STUDY OF OAXACA STATE, SOUTHWESTERN MEXICO (A031904); 24 MONTHS \$33,900

BAKER, DONALD R: THE DISTRIBUTION AND NATURE OF CARBON IN IGNEOUS ROCKS AND MANTLE DERIVED MATERIALS (AGJISSO): 24 MONTHS \$28,000

### SOUTHERN METHODIST UNIVERSITY

BLACKWELL, DAVID D; HEAT FLOW AND CRUSTAL RADIOACTIVITY STUDIES IN THE NORTHWESTERN U.S. (A01351 003); 24 MONTHS \$70,200 BLACKWELL, DAVID D; HEAT FLOW STUDIES IN SOUTHERN MEXICO (A230550); 24 MONTHS \$35,300

## TEXAS A & M UNIVERSITY

STANTON, ROZERT I JR; PALEOECOLOGY OF THE MARINE PLIOCENE OF TAX PACIFIC COAST (A030746); 24 MONTHS \$27,400



### UNIV OF TEXAS AT AUSTIN

PARKER, PATRICK L: VARIATIONS IN STABLE CARBON, OXYGEN AND NITROGEN ISOTOPE RATIOS IN NORMAL AND POLLUTED BIOGEOCHEMICAL SYSTEMS (A01111 001); 24 MONTHS \$44,000

MAXWELL, JOHN C; EMPLACEMENT OF FRANCISCAN-TYPE ROCKS AND ORIGIN OF RELATED MAFIC AND ULTRAMAFIC ROCKS (AMISE

001), 12 MONTHS \$12.400

MCBRIDE, EARLE F; SEDIMENT PARTICLE MOTION AND THE ORIGIN OF BEDDING IN UNIDIRECTIONAL CURRENT FLOW IN. VESTIGATED BY USE OF HIGH SPEED MOTION PICTURE PHOTOG. RAPHY (Adsors); 18 MONTHS \$9,700

SMITH, DOUGLAS: PETROGRAPHIC AND ELECTRON MICROPROBE STUDY OF IRON-RICH PYROXENES AND OLIVINES (AGIOGI); 18

MONTHS \$23,200

BARKER, DANIEL S, AND LONG, LEON B: PETROLOGY AND GEOCHRONOLOGY OF CENOZOIC INTRUSIVE ROCKS, TRANS-PECOS PROVINCE, TEXAS (Actions); 24 MONTHS \$42,700

### UNIV OF TEXAS AT DALLAS

HELSLEY, CHARLES E: PALEOMAGNETIC STUDIES ON STRATI-GRAPHIC SEQUENCES OF PALEOZOIC AND MESOZOIC AGES FROM THE WESTERN U. S. (A015999 601); 24 MONTHS \$80,000

LANDISMAN, MARK; MULTI-DISCIPLINARY STUDIES OF STABLE AND TECTONICALLY ACTIVE REGIONS OF THE CRUST AND UPPER MAN-TLS IN THE UNITED STATES (A01568) COI); 12 MONTHS \$85,000

HALES, ANTON L; A FIELD PROGRAM FOR THE DETERMINATION OF THE UPPER MANTLE SHEAR VELOCITY (ACSISSA): 24 MONTHS \$80,000

# BRIGHAM YOUNG UNIVERSITY

BEST, MYRON G; MANTLE-DERIVED INCLUSIONS IN BASALTS (A015088 001): 24 MONTHS \$25,000

HAMBLIN, W KENNETH, AND BEST, MYRON G; KAR DATES AND PALEOMAGNETIC MEASUREMENTS IN THE LATE CENOZOIC BASALTS IN THE WESTERN GRAND CANYON (AGJIOJS); 12 MONTHS \$10,000

### UNIVERSITY OF UTAH

SMITH, ROBERT B, AND GOODWIN, JONATHAN H; SEISMIC AND MAG-NETIC PROFILING OF INLAND LAKES, WESTERN UNITED STATES (A012870 601); 24 MONTHS \$35,600

COOK, KENNETH L; OPERATION OF UINTA BASIN SEISMOLOGICAL OBSERVATORY (A011110 001); 7 MONTHS \$30,000

COOK, KENNETH L; GRAVITY STUDIES IN UTAH (INCLUDING BOU-GUER GRAVITY MAP OF UTAH) (AGIOISE), 24 MONTHS \$16,000

NACKOWSKI, MATTHEW P, AND WARD, STANLEY H; MUL-IFREQUENCY ELECTROMAGNETIC EXPLORATION (AGJION): 18 TIFREQUENCY MONTHS \$42 800

SHUEY, BALPH T; QUANTITATIVE INTERPRETATION OF REGIONAL MAGNETIC ANOMALIES (A031300); 24 MONTHS \$17,600

WARD, STANLEY H, NASH, WILLIAM P, AND SHUEY, R T; STUDY OF ELECTRICAL PROPERTIES OF ROCKS AND ORES (A031371); 24 MONTHS \$50,000

PERLA, RONALD I; AN INVESTIGATION OF THE STRESS IN NATURAL SNOW SLABS (A0J1831); 12 MONTHS \$12,500

### VIRGINIA POLYTECHNIC INSTITUTE

GILBERT, M CHARLES; EXPERIMENTAL DETERMINATION OF AM-PHIBOLE STABILITY AND AMPHIBOLE MISCIBILITY GAPS (A014179 001): 24 MONTHS \$51,800

CIBBS, G V, AND RIBBE, P H; BONDING IN MINERALS WITH TETRAHEDRAL IONS (A03084) X00); 12 MONTHS \$55,800

SINHA, AKHAURY K, AND GLOVER, LYNN III; U.PB GEOCHRONOLO-GY OF THE CENTRAL AND SOUTHERN APPALACHIANS AND PB-U-TH STUDIES OF IRON METEORITES (AGILIE); 12 MONTHS \$34,800

HEWITT, DAVID A; EXPERIMENTAL STUDY OF BIOTITE PHASE EQUILIBRIA (A032287), 24 MONTHS \$39,700

BLOSS, F DONALD; NEW THERMO-OPTICAL TECHNIQUES AND THEIR APPLICABILITY TO CORDIERITE AND FELDSPAR PROBLEMS (AGIELLY); 24 MONTHS \$34,500

## WASHINGTON

## UNIVERSITY OF WASHINGTON

PORTER. PORTER, STEPHEN C: VOLCANIC STRATIGRAPHY AND GEOCHRONOLOGY, WEST RIFT ZONE OF MAUNA KEA VOLCANO, HAWAII (A020320 001); 12 MONTHS \$11,600

EVANS, BERNARD W; PETROLOGIC STUDIES OF ULTRAMAFIC ROCKS (A029767 001); 18 MONTHS \$30,000

HENNES, R G; INTERNATIONAL CONFERENCE ON MICROZONATION (Kosssis\*); 12 MONTHS \$6,000

# western washington state college

BABCOCK, R S, AND BROWN, E H; ORIGIN OF MIGMATITES IN THE GRAND CANYON (A031212); 24 MONTHS \$28,700

BECK, MYRL E JR; ROCK MAGNETISM AND TECTONICS OF THE TWIN SISTERS DUNITE (A041885); 12 MONTHS \$8,100

### WISCONSIN

# UNIVERSITY OF WISCONSIN, MADISON

GUIDOTTI, CHARLES V; PETROLOGY AND MINERALOGY OF THE PELITIC SCHISTS OF NORTHWESTERN MAINE (A019413 001): 24 MONTHS \$25,400

CRADDOCK, CAMPBELL: MECHANICS AND HISTORY OF THE DENAL!

FAULT, ALASKA (ADJIME DOLN IN MONTHS \$50,000
BENTLEY, CHARLES R; STUDY OF IMPROVEMENTS IN MAG-NETOTELLURIC ANALYSIS AND MODELING TECHNIQUES (AGSOTTI); 12 MONTHS \$39,000

DOTT, R R JR; MODERN AND ANCIENT GEOSYNCLINAL SEDIMENTA. TION (A01141); 12 MONTHS \$15,600

BAILEY, STURGES W; STRUCTURES OF LAYER SILICATE MINERALS (A034918); 24 MONTHS \$27,500

## UNIVERSITY OF WISCONSIN, MILWAUKER

WOLD, RICHARD J; SUB-BOTTOM SEISMIC PROFILING OF INLAND LAKES (A030768); 18 MONTHS \$63,400

#### WYOUWIG

#### UNIVERSITY OF WYOMING

SMITHSON, SCOTT B; THREE-DIMENSIONAL STUDIES OF GRANITIC PLUTONS (AGISSTI 001); 24 MONTHS \$30,900

SHIVE, PETER N; MOSSBAUER STUDIES OF MAGNETIC MINERALS (A015732 001); 24 MONTHS \$33,000

SURDAM, RONALD C; THE DEPOSITIONAL ENVIRONMENT OF THE GREEN RIVER FORMATION (AGS)189); 24 MONTHS \$35,100

## **OCEANOGRAPHY**

# PHYSICAL OCEANOGRAPHY AND MARINE CHEMISTRY

#### ALASKA

# University of Alaska-Institute of Marine Science

KINNEY, P J, AND HOSKINS, L C; TRANSITION METAL COMPLEXA-TION IN SEA WATER (ACSIITA); 12 MONTHS \$51,400

ROYER, THOMAS C; EVALUATION OF LONG PERIOD SURFACE WAVES IN THE GULF OF ALASKA (AGSISS); 24 MONTHS \$104,800

MCROY, C PETER, AND GOERING, JOHN J; OCEANOGRAPHY OF THE BERING SEA- PHASE II- PRIMARY PRODUCTIVITY AND FOOD CHAINS OF MARINE MAMMALS (A033387 001°); \$5,000

### CALIFORNIA

# UNIVERSITY OF CALIFORNIA, DAVIS

MYRUP, LEONARD O, POWELL, THOMAS, RICHERSON, PETER J, AND MORGAN, DONALD L: SPATIAL AND TEMPORAL DISTRIBUTION OF LAKE PLANKTON (ADJIOSS): 18 MONTHS \$84,700

## University of California, los angeles

KAPLAN, ISAAC R, AND VEN-YAAKOV, S; MECHANISMS FOR CAR-BONATE SOLUTION IN THE OCEANS (AGGIGG\*); 12 MONTHS \$25,000

University of California, san diego-scripps institution of **OCEANOGRAPHY** 

SHEPARD, F P; NATURE AND VELOCITY OF CURRENTS IN SUB-MARINE CANYONS AND THEIR MARGINS (A0194) 001); 12 MONTHS

SMITH. RAYMOND C; MEASUREMENT OF RADIANCE DISTRIBUTIONS IN NATURAL WATERS (A019738 002); 12 MONTHS \$32,900

TYLER, JOHN E; HYDROLOGIC OPTICS (A019830 002); 12 MONTHS \$73,900 CHOW, T J; LEAD POLLUTANTS IN NEAR SHORE MARINE ENVIRON-MENTS (A026301 001), 12 MONTHS \$46,000

REELING, CHARLES D; THE ABUNDANCE OF CARBON DIOXIDE IN THE ATMOSPHERE AND ITS EXCHANGE WITH THE OCEANS LAGISTER X00°), 12 MONTHS \$52,000

### CONNECTICUT

## YALE UNIVERSITY

VERONIS, GEORGE; PHYSICAL OCEANOGRAPHY AND GEOPHYSICAL FLUID DYNAMICS (ADSSTS 001): 12 MONTHS \$73,100
BERNER, ROBERT A: DISSOLUTION KINETICS AND SURFACE CHEMISTRY OF CALCIUM CARBONATE IN SEA WATER (A030488 X00): 12 MONTHS \$57,300

VERONIS, GEORGE; THEORETICAL NUMERICAL MODELS OF OCEAN CIRCULATION FOR USE WITH TRACER DISTRIBUTIONS (Addition): 12 MONTHS \$22,100

### DELAWARE

## University of Delaware

KUPFERMAN, STUART L; MEASUREMENT OF THE RESIDENCE TIME OF WATER ABOVE THE MAIN THERMOCLINE IN THE NORTH ATLAN-TIC BY MEANS OF A TRACER TECHNIQUE LADSSISS XOIX 12 MONTHS \$37,000



### DISTRICT OF COLUMBIA

NONE; OTHER PROGRAM AWARDS (GIAWDS); \$34,869

NATIONAL ACADEMY OF SCIENCES

VETTER, RICHARD C; SUPPORT OF THE SCIENTIFIC COMMITTEE ON OCEANIC RESEARCH (C#10042 000); 12 MONTHS \$5,000

DEPARTMENT OF NAVY-OFFICE OF NAVAL RESEARCH

KIRWAN, A DENNIS; SUPPORT OF THE COMMITTEE ON OCEANOG-RAPHY OF THE NATIONAL ACADEMY OF SCIENCES (AGOOM: 000°): 12 MONTHS \$5,000

NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL HEINDL, L A; U. S. NATIONAL COMMITTEE FOR THE INTERNA-TIONAL HYDROLOGICAL DECADE (CSIOISS 005°); 12 MONTHS \$30,000

#### PLORIDA

PLORIDA STATE UNIVERSITY

HSUER, Y; THE STUDY OF BOUNDARY JETS IN A ROTATING WATER TUNNEL- WITH APPLICATION TO OCEAN CURRENTS (A01654) 001); 12 MONTHS \$20,000

OBRIEN, JAMES 1; DYNAMIC MODELS OF THE CONTINENTAL SHELF CIRCULATION (1) (A02172) 001); 12 MONTHS \$46,000

NOVA UNIVERSITY

NILLER, PEARN P, AND MOORE, DENNIS W; PLANETARY AND INTERNAL GRAVITY WAVES (A01488 001), 12 MONTHS \$73,600

WEATHERLY, GEORGES L; STUDY ON THE TIME-DEPENDENT TUR-BULENT ERMAN LAYER (AG1778); 8 MONTHS \$13,000

RICHARDSON, WILLIAM S, NIILER, PEARN P, AND WIMBUSH, MARK; EXPERIMENTAL STUDIES OF THE GENERATION OF WATER MOVE-MENTS ON THE CONTINENTAL SHELF BY STRONG METEOROLOGICAL DISTRUBANCES (AGSID); 12 MONTHS \$270,600

UNIVERSITY OF PLORIDA-ENGINEERING & INDUSTRIAL

EXPERIMENT STATION

SHEMDIN, O H; LABORATORY INVESTIGATION OF GENERATION AND GROWTH OF WIND WAVES (KOS1805 001\*); \$39,500

UNIVERSITY OF MIAMI-SCHOOL OF MARINE AND ATMOSPHERIC SCIENCES

MILLERO, FRANK J; STUDY OF IONIC INTERACTIONS IN SEAWATER (A017386 002), 24 MONTHS \$81,100

MOOERS, CHRISTOPHER N K; OCEANIC FRONTS AND THEIR PER-TURBATIONS (A017940 X01); 12 MONTHS \$26,100

ESTOQUE, M A; MESOMETEOROLOGICAL EFFECTS OF LAKE ON-TARIO (AGJEGO); 12 MONTHS \$52,500

ROOTH, CLAES, AND OSTLUND, GOTE; STUDIES OF OCEANIC EXCHANGE BASED ON THE GLOBAL TRITIUM TRANSIENT (ACMISSA

EXCHANGE BASED ON THE GLOBAL TRITIUM TRANSIENT (A033983 XOO); 12 MONTHS \$67,000 SEGAR, DOUGLAS A; STUDIES OF THE CHEMISTRY OF SEAWATER GVERLYING AREAS OF HIGH HEAT FLOW (A033003); 12 MONTHS \$28,400

GVERLYING AREAS OF HIGH HEAT FLOW (A033003): 12 MONTHS \$28,400 DUING, WALTER; EXCHANGE PROCESSES ON CONTINENTAL SHELVES INDUCED BY BAROTROPIC AND BAROCLINIC LONG WAVES (A034009); 12 MONTHS \$215,600

### KAWAH

UNIVERSITY OF HAWAII

CHAVE, KEITH E, AND KAY, E ALISON; ECOLOGICAL AND GEOLOGI-CAL STUDIES OF FANNING ISLAND (AQUIJI1\*): 12 MONTHS \$21,650

### KLINOIS

UNIVERSITY OF CHICAGO

PLATZMAN, GEORGE W: GLOBAL OSCILLATIONS OF THE WORLD'S OCEANS (A015995 001); 24 MONTHS \$94,800

### MARYLAND

NONE; OTHER PROGRAM AWARDS (01AWDS); \$2,165

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION

AUSTIN, THOMAS S; WCRLD DATA CENTER A FOR OCEANOGRAPHY (AGOODET); 12 MONTHS \$102,100

### **MASSACHUSETTS**

AMBERST COLLEGE

BENSON, BRUCE B; MASS SPECTROMETRIC AND MANOMETRIC STU-DIES OF THE OCEANS AND THE ATMOSPHERE (A013137 001); 12 MONTES \$41.300

HARVARD UNIVERSITY

L1, YUAN-HUI; DETERMINATION OF THE APPARENT DISSOCIATION CONSTANTS OF CARBONIC ACIDE (KI' AND K#) IN SE4 WAPER (AGGLIT); 12 MONTHS \$16,100

SIEVER, RAYMOND; THE DISTRIBUTION OF CADMIUM IN THE OPEN NORTH ATLANTIC OCEA!! (A333001); 24 MONTHS \$19,500

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

STOMMEL, HENRY M; RESEARCH IN OCEANIC PHYSICS (Actores Xoo); 12 MONTHS \$174,900

WUNSCH, CARL; SEA LEVEL AND TIDES (A051978); 18 HONTHS \$44,500

WOODS HOLE OCEANOGRAPHIC INSTITUTION

BREWER, PETER G, AND SPENCER, DEREK W; TRACE ELEMENT DISTRIBUTIONS IN THE OCEAN (A013514 001); 24 MONTHS \$106,700

BRUCE, JOHN G: STUDY OF THE SOMALI CURRENT AND AS-SOCIATED CIRCULATION DURING THE SOUTHWEST MONSOON (A017189) 001); IE MONTHS 454,000

VOORHIS, ARTHUR D; ACOUSTIC DROPSOMDE TO STUDY THE OCEANIC CIRCULATION (A01851) 001); 6 MONTHS \$7,630

METCALF, WILLIAM G: CARIBBEAN SEA INFLOW INVESTIGATION (ACCTACT COI); 6 MONTHS \$103,000

SAYLES, FREDERICK L; SEA WATER - SEDIMENT INTERACTION-THE DIFFUSIVE FLUXES OF IONS BETWEEN THE OCEANS AND THE UNDERLYING SEDIMENTS (AGS4344\*); 12 MONTHS \$19,150

### **MICHIGAN**

UNIVERSITY OF MICHIGAN

MONHAN, EDWARD C; DOCTORAL DISSERTATION RESEARCH IN OCEANOGRAPHY (A031557); 6 MONTHS \$2,000

#### NEVADA

DESERT RESEARCH INSTITUTE

TELFORD, JAMES W; APPLICATION OF THE BUFFALO RESEARCH SYSTEM TO ATTAIN IFYGL LAKE METEOROLOGY OBJECTIVES (AUSIECE); 12 MONTHS \$79,900

### **NEW JERSEY**

PRINCETON UNIVERSITY

STEGEN, GILBERT R; THREE-DIMENSIONAL STRUCTURE OF THE THERMOCLINE (AGS1970); 12 MONTHS \$21,400

#### **NEW YORK**

CORNELL ABRONAUTICAL LABORATORY

PIECH, KENNETH R; OPTICAL PROPERTIES OF LAKE ONTARIO (A012907); 12 MONTHS \$36,600

UNIVERSITY OF ROCHESTER

DIMENT, WILLIAM H; TRANSPORT PROCESSES WITHIN THE ROCHESTER EMBAYMENT OF LAKE ONTARIO (AG1209); 12 MONTHS \$78,600

COLUMBIA UNIVERSITY-LAMONT-DOHERTY GEOLOGICAL

OBSERVATORY
BROECKER, WALLACE S, GAS EXCHANGE RATE STUDIES (A033124);
12 MONTHS \$32,500

NEW YORK UNIVERSITY UNIVERSITY HEIGHTS CENTER

FREY, HENRY R; INVESTIGATION OF NATURALLY OCCURRING WATERBORNE TURBULENCE BY STEREOPHOTOGRAMMETRY (A025724); 12 MONTHS \$22,500

### OHIO

UNIVERSITY OF CINCINNATI

MARK, HARRY B JR; IN SITU ANALYSIS OF TRACE METAL IONS IN SEA WATER SYSTEMS (A023563 001); 19 MONTHS \$12,100

### OREGEN

OREGON STATE UNIVERSITY

BYRNE, JOHN V: AIR-SEA GAS EXCHANGE OFF OREGON (A012112 002); 2 MONTHS \$10,000

NESHYBA, STEVE, AND NEAL, V T; NATURE AND CAUSES OF THE LAMINAR STRUCTURE (A01714 001), 12 MONTHS \$50,100

CALDWELL, DOUGLAS R; TIME FLUCTUATIONS IN OCEAN CUR-RENTS (AGS0717); 24 MONTHS \$48,100

### PENNSYLVANIA

PENNSYLVANIA STATE UNIVERSITY

ALLEN, JOHN S; THREE-DIMENSIONAL MODEL OF UPWELLING IN A STRATIFIED OCEAN (A050597); 24 MONTHS \$58,100

PANOFSKY, HANS A; STRUCTURE OF TURBULENCE (AOSERGI); 12 MONTHS \$46,400

### RHODE ISLAND

UNIVERSITY OF RHODE ISLAND

1.AMBERT, RICHARD B JR, AND STERN, MELVIN E; STUDIES OF YER-TIGAL MIXING IN THE OCEAN (A021212 001): 12 MONTHS \$49,900

UNIVERSITY OF RHODE ISLAND-GRADUATE SCHOOL OF

OCEANOGRAPHY

KESTER, DANA R; THE COLLIGATIVE PROPERTIES OF SEAWATER (A019940 001); 12 MONTHS \$19,100



PILSON, MICHAEL & Q. DIFFUSION FROM SEDIMENTS (A01/114 001\*); 24 MONTHS 118.100

DUCE, ROBERT A; SYMPOSIUM ON NON-GASSOUS CHEMICAL TRANS-PORT FROM OCEAN TO ATMOSPHERE (ACJOSSO); 12 MONTHS \$4,400

KNAUSS, JOHN A; OBSERVATIONS OF EQUATORIAL CURRENTS IN THE ATLANTIC OCEAN (AQ.: 0 to): 24 MONTHS \$15,000

PILSON, MICHAEL E Q: ARSENIC SPECIATION IN SEAWATER (ADJIDITE 24 MONTHS \$30,500

#### TEVAL

### GULP UNIVERSITY RESEARCH CONSORTIUM

BILHORN, THOMAS W: THE DYNAMICS OF CIRCULATIONS ON A CON-TINENTAL SHELF (AOS 1008); 12 MONTHS \$38,000

### TEXAS A & M UNIVERSITY

JEFFREY, LELA M; ORGANIC COMPOSITION OF NATURAL WATERS
(Additi): 12 MONTHS 832.300

### UTAH

#### INIVERSITY OF UTAH

LIN, ANCHING; AN IN-SITU STUDY OF DIFFUSION IN THE HALOCLINE OF THE GREAT SALT LAKE (A050861); 18 MONTHS \$31,300

#### WASHINGTON

LARSEN, LAWRENCE; OTHER PROGRAM AWARDS (OJAWDS): 18 MONTHS \$45.500

### UNIVERSITY OF WASHINGTON

COACHMAN, LAWRENCE K; PHYSICAL OCEANOGRAPHY OF THE BERING SEA (A011117 001): 24 MONTHS \$135,400

SMITH, J DUNGAN, A FIELD INVESTIGATION OF TIDAL AND RIVER FLOW OVER NON-UNIFORM BOUNDARIES (A014178 004\*); 24 MONTHS \$64,500

RATTRAY, MAURICE JR. AND LARSEN, LAWRENCE H; MARINE HYDRODYNAMICS (A022691 004); 4 MONTHS \$(1,700

LEE, FANG AN; STUDIES IN WIND-GENERATED WAVES (ACCREC GOI); 12 MONTHS \$20,400

RATTRAY, HAURICE JR, AND LARSEN, LAWRENCE H; STUDIES IN MARINE HYDRODYNAMICS (A030745 X00); 12 MONTHS \$109,600

EWART, TERRY E; OPEN OCEAN DIFFUSION STUDIES (AGJIJIO); 12 MONTHS 456 000

BUSINGER, JOOST A: INTERNATIONAL FIELD YEAR OF THE GREAT LAKES (A032-05); 12 MONTHS \$60,000

HASSELMANN, ERWIN D; EXPONENTIAL GROWTH OF WAVES GENERATED BY A TURBULENT WIND (ACMITS); 12 MONTHS \$21,000

### WISCONSIN

### UNIVERSITY OF WISCONSIN, MADISON

LYONS, WALTER A: THE USE OF SATELLITE AND SURFACE ALL-SKY PHOTOGRAPHY DATA IN DETERMINING THE SOLAR INSOLATION CLI-MATOLOGY OF LAKE ONTARIO (A01208); 12 MONTHS \$35,900

GREEN, THEODORE III, AND RAGOTZKIE, ROBERT A; STUDY OF THE KEWEENAW CURRENT AND ITS ROLE IN THE CIRCULATION OF LAKE SUPERIOR (AGJJ149): 18 MONTHS \$141,100

### UNIVERSITY OF WISCONSIN, MILWAUKEE

RAO. DESIRAJU B; NUMERICAL STUDIES IN THE CIRCULATIONS AND STORM SURGES IN LAKE ONTARIO (AGJ204); 12 MONTHS \$27,900

### GEOLOGICAL OCEANOGRAPHY

### CALIFORNIA

### CALIFORNIA STATE UNIVERSITY, HUMBOLDT

GARLICK, G DONALD; STABLE ISOTOPE STUDY OF AUTHIGENIC PHASES ON THE EAST PACIFIC RISE (A032516); 24 MONTHS \$6,000

### STANFORD UNIVERSITY

COX, ALLAN V; SEARCH FOR SHORT GEOMAGNETIC POLARITY INTERVALS IN MARINE MAGNETIC PROFILES (A030810): 24 MONTHS \$46,900

### UNIVERSITY OF CALIFORNIA, BERKELEY

BURLINGAME, A L; ANALYSES OF FATTY ACIDS, HYDROCARBONS AND RELATED ORGANIC MATTER IN THE JOIDES CORES (AG1414 001); 9 MONTHS \$33,900

### UNIVERSITY OF CALIFORNIA. LOS ANGELES

KAPLAN, I R; EPHEMERAL PROPERTIES OF INTERSTITIAL WATER FROM THE OCEAN SEDIMENT CORING PROGRAM - CARBON (CIJICIE) AND SULFUR (SIJISIE) MEASUREMENTS ON DISSOLVED COMPONENTS (Addries 60); 8 MONTHS \$15,900

KAPLAN, ISAAC R, AND VEN-TAAKOV, S; MECHANISMS FOR CAR-BONATE SOLUTION IN THE OCE.(NS (A034104\*): 12 MONTHS \$25,000

### UNIVERSITY OF CALIFORNIA, SAN DIEGO

SPIESS, F N, AND MUDIE, J D; SAMOAN PASSAGE STUDIES (AGSHEE); 24 MONTHS \$55,000

## UNIVERSITY OF SOUTHERN CALIFORNIA

GORSLINE, D.S., AND DRAKE, D.E.; SUSPENDED SEDIMENT STUDIES-SUBMARINE CANYONS AND CALIFORNIA CONTINENTAL MARGIN (Advisio 12 MONTHS 222 100

GORSLINE, DONN 8; TECTONIC AND SEDIMENTOLOGICAL IN-VESTIGATION OF A PORTION OF THE PACIFIC CONTINENTAL MARGIN OFF BAJA CALIFORNIA (ACCESS) 2011; 12 MONTHS 19,800

BANDY, ORVILLE L; PALEO-OCEANOGRAPHIC INTERPRETATION OF SOME UNUSUALLY COMPLETE RED SEA CORES (Acades); 12 MONTHS to 100

HENYEY, THOMAS L; THERMAL AND SEISMIC STUDIES ALONG THE CONTINENTAL BORDERLAND OF CALIFORNIA AND NORTHWESTERN MEXICO (AGOSSI); 12 NONTHS \$24,100

BANDY, ORVILLE L: VARIATIONS IN THE ZONATION OF FORAMINIFERIDA, RADIOLARIDA, AND NANNOPLANKTON IN SELECTED CORES FROM OCEANIC BASINS (A014143); 12 MONTHS 435,100

# UNIVERSITY OF CALIFORNIA, SAN DIEGO-SCRIPPS INSTITUTION OF OCEANOGRAPHY

RAITT, RUSSELL W, AND SHOR, GEORGE G JR; SEISMIC ANISOTROPHY OF THE PACIFIC MANTLE (ACIDIO) 001); \$3,500

SHOR, GEORGE G JR, AND RAITT, RUSSELL W; MARINE SEISMIC REFRACTION, ANISOTROPY AND STRUCTURAL STUDIES (A01970) 003); 12 MONTHS \$86,400

WINTERER, JACQUELINE M; BATHYMETRY OF THE SOUTH PACIFIC (A02713) 001): 24 MONTHS \$53,700

VACQUIER, VICTOR, AND SCLATER, JOHN G; OCEANIC HEAT-FLOW MEASUREMENTS AND ABYSSAL TEMPERATURE VERSUS DEPTH PROFILES (AOVEISE XOI); 12 MONTHS \$35,000

DAVIES, THOMAS A; GEOLOGICAL AND GEOPHYSICAL INVESTIGA-TIONS IN THE WESTERN NORTH PACIFIC (AGGIRR); 12 MONTHS \$15,000 HAWKINS, JAMES W JR; GEOLOGIC AND GEOPHYSICAL STUDIES . LAU BASIN (AGGGIS); 12 MONTHS \$14,000

RIEDEL, WILLIAM R; TAXONOMIC AND STRATIGRAPHIC INVESTIGA-TION OF RADIOLARIANS IN SEDIMENT SEQUENCES MOSTLY FROM THE SEA-FLOOR (A031284 X00), 12 MONTHS \$45,000

COX, CHARLES S, PARKER, ROBERT L, AND VACQUIER, V; ELECTROMAGNETIC STUDIES OF THE OCEAN LITHOSPHERE AND OF THE OCEAN WATER CURRENTS AT THE MODE I SITE (ADJIJLE®): 24 MONTHS \$184,800

SPIESS, F N. AND MUDIE, J D; INVESTIGATION OF FINE SCALE ASPECTS OF THE DEEP-SEA FLOOR (A0J1377 X00); 12 MONTHS \$115,000

RIEDEL, WILLIAM R; CURATING OF THE DEEP-SEA GEOLOGICAL COLLECTIONS AT SCRIPPS INSTITUTION OF OCEANOGRAPHY (A012171); 12 MONTHS \$22,200

SCLATER, JOHN C, HAWKINS, JAMES W JR, AND WINTERER, ED. WARD L; GEOLOGICAL AND GEOPHYSICAL INVESTIGATIONS ON THE GALAPAGOS RIFT ZONE (A033227); 19 MONTHS \$90,000

GIESKES, JORIS M; GEOCHEMICAL STUDIES OF MARINE SEDIMENTS AND THEIR INTERSTITIAL WATERS (A0JJ229); 24 MONTHS \$12,900

### CONNECTICUT

## YALE UNIVERSITY

ARMSTRONG, RICHARD L, AND TUREKIAN, KARL K; AR40/AR49 DAT-ING OF MARINE VOLCANICS AND SEDIMENTS (A0J0478); 12 MONTHS \$4,600

### DELAWARE

### UNIVERSITY OF DELAWARE

GLASS, BILLY P. GEOGRAPHICAL DISTRIBUTION, AGE OF DEPOSI-TION AND PHYSICAL AND CHEMICAL PROPERTIES OF DEEP-SEA MICROTEKTITES (A0J1477), 12 MONTHS \$9,300

### DISTRICT OF COLUMBIA

## DEPARTMENT OF NAVY-OFFICE OF NAVAL RESEARCH

KIRWAN, A DENNIS; SUPPORT OF THE COMMITTEE ON OCEANOG-RAPHY OF THE NATIONAL ACADEMY OF SCIENCES (AGU0211 001\*); 12 MONTHS \$5,000

### FLORIDA

## UNIVERSITY OF MIAMI

FISHER, DAVID E; POTASSIUMIARGON, RARE GAS STUDIES, AND FISSION TRACK ANALYSIS OF DEEP-SEA SAMPLES (A015247 001); 12 MONTHS \$60,000

### UNIVERSITY OF SOUTH FLORIDA

PYLE, THOMAS E; A STUDY OF THE LITHOLOGY AND AGE OF ROCKS FROM THE YUCATAN CHANNEL AND NORTHWESTERN CARIBBE AN SEA (AGJ1719); 6 MONTHS \$5,400



# UNIVERSITY OF MIAMI-SCHOOL OF MARINE AND ATMOSPHERIC REPORTS

NEUMANN, A CONRAD; SHALLOW WATER CARBONATE ENVIRON-MENTS AND QUATERNARY SEA LEVELS, SOUTH FLORIDA AND BAHAMAS (AGIS18) 001); 6 MONTHS \$37,000

EMILIANI, CEBARE; ISOTOPIC PALEOTEMPERATURE RESEARCHES ON EARLY PLEISTOCENE AND PRE-PLEISTOCENE DEEP-SEA DRILL CORES (A013116 00); 12 MONTHS \$118,600

BOSTROM, KURT, ORIGIN AND GEOCHEMICAL HISTORY OF ACTIVE RIDGE SEDIMENTS (A01524 002); 12 MONTHS \$70,000

EMILIANI, CESARE; CURATING OF MARINE GEOLOGICAL COLLEC-TIONS AND THIN-SECTIONING OF OCEANIC ROCKS (A085016 001); 12 MONTHS 822 600

BOCK, WAYNE D; BENTHONIC FORAMINIFERA AS PALEOTECTONIC AND PALEOECOLOGIC INDICATORS IN SOME OCEAN SEDIMENT CORES INCLUDING CORES OF THE NATIONAL OCEAN SEDIMENT COR-ING PROGRAM (Aprils 601): \$5,400

EMILIANI, CESARE; ACQUISITION OF SELECTED PISTON CORES FROM THE GULF OF MEXICO AND CARIBBEAN (AMISON): 12 MONTHS \$8,700

HAY, WILLIAM W. AND MARSZALEK, DONALD S; IDENTIFICATION OF FOSSILS FOR PROBABILISTIC BIOSTRATIGRAPHY (AGJ: 169 X00); 12 MONTHS \$59,100

BONATTI, ENRICO; PETROLOGY AND GEOCHEMISTRY OF IGNEOUS ROCKS FROM OCEANIC RIDGES (A034917); 12 MONTHS \$60,000

#### GEORGIA

## SKIDAWAY INSTITUTE OF OCEANOGRAPHY

HOWARD, JAMES D. COMPARISON OF ANCIENT AND MODERN COASTAL CLASTIC SEDIMENTARY ENVIRONMENTS (A030365); 12 MONTHS \$13,000

### HAWAII

### UNIVERSITY OF HAWAII

WOOLLARD, GEORGE P; SCIENTIFIC SUPPORT FOR DEEP SEA DRILLING PROJECT SITE SURVEYS (A018141 001); 12 MONTHS \$50,000

WOOLLARD, GEORGE P; FOR REDUCTION OF GEOPHYSICAL AND GEOLOGICAL DATA TAKEN 1910 CRUISE OVER THE DARWIN RISE (Adjot40); 12 MONTHS \$80,000

SUTTON, GEORGE, AND ANDREWS, JAMES; ANISOTROPY AND CRUSTAL STRUCTURE IN SELECTED AREAS OF THE PANAMA BASIN (AMJ075); 12 MONTHS \$89,300

### ILLINOIS

### NORTHWESTERN UNIVERSITY

LERMAN, ABRAHAM; CHEMICAL TRANSPORT MOLELS IN SEDI-MENTS AND WATER (A030789); 12 MONTHS \$14,700

### LOUISIANA

### LOUISIANA STATE UNIVERSITY, BATON ROUGE

PERKINS, BOB F; DOCTORAL DISSERTATION RESEARCH IN OCEANOGRAPHY (A014103\*); 24 MONTHS \$4,400

### NORTHBAST LOUISIANA UNIVERSITY

BAKER, EARL W; INVESTIGATIONS OF THE DIAGENESIS OF CHLOROPHYLL PIGMENTS IN DEEP SEA DRILLING PROJECT CORES (ADJITIE); 9 MONTHS \$15,800

### MAINE

### UNIVERSITY OF MAINE, ORONO

SCHNITKER, DETMAR; ECOLOGY AND DISTRIBUTION OF ABYSSAL FORAMINIFERA (A010640); 24 MONTHS \$28,100

FINK, L K JR; MARINE GEOPHYSICAL AND GEOLOGICAL INVESTIGA-TIONS OF THE NORTHERN LESSER ANTILLES ISLAND ARC (A050612); 12 MONTHS \$17.400

### MASSACHUSETTS

### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

FREY, P. A. THOMPSON, G. AND HUNT, J.; INVESTIGATIONS OF SEA FLOOR BASALT AND BASEMENT ROCKS, (JOIDES) (AGJ1844 X00); 12 MONTHS 454,800

### UNIVERSITY OF MASSACRUSETTS, AMBERST

WEBB, GREGORY W; SEISMIC PROFILER AND SAMPLE STUDY OF GRAVITY SLIDE MASSES ON CONTINENTAL SLOPE AND RISE OFF SCO-TIAN SHELF AND GRAND BANKS (AGJUM); 3 MONTHS \$2,000

### WOODS HOLD OCHANOGRAPHIC INSTITUTION

SAYLES, FREDERICK L; THE GEOCHEMISTRY OF INTERSTITIAL SOLUTIONS IN THE DEEP SEA DRILLING PROJECT CORES (A014345 COI); 9 MONTHS \$31,000

VON HERZEN, R.P., AND ERICKSON, A.J.; GEOTHERMAL INVESTIGA-TIONS IN OCEANIC REGIONS (A016018 001); 12 MONTHS \$41,900

THOMPSON, GEOFFREY; GEOCHEMICAL STUDY OF SUBMARINE WEATHERING OF ROCES FROM THE MID-ATLANTIC RIDGE (A018731 001); 12 MONTHS \$17,500

HOLLISTER, CHARLES D. AND HEINMILLER, ROBERT H; SEDIMEN-TATION PROCESSES AND CURRENT MEASUREMENTS ON THE AN-TILLES OUTER RIDGE (A014)12 001); 12 MONTHS \$30,000

SAYLES, FREDERICK L; HYDROTHERMAL DEPOSITS IN THE SEDI-MENTS OF THE MID-AYLANTIC RIDGE AND EAST PACIFIC RISE (A083804 001); 6 MONTHS \$7,400

BUNCE, ELIZABETH T: STUDY OF THE CRUSTAL STRUCTURE OF THE OCEANS USING SEISMIC TECHNIQUES (A001514 001); 12 MONTHS 270 000

VON HERZEN, RICHARD P. AND ERICKSON, ALBERT J; GEOTHER. MAL STUDIES IN DEEP-SEA DRILL HOLES (A008504 001); 12 MONTHS 484.400

LUYENDYK, BRUCE P, AND BRYAN, WILFRED B; STRUCTURE AND HISTORY OF THE NEW HEBRIDES ISLAND ARC SYSTEM (A028947 001); 4A600

HONJO, SUSUMU, AND EMERY, K O; SUSPENDED PARTICLES IN SEA WATER, QUALITATIVE, QUANTITATIVE STUDY BY ELECTRON MICROSCOPE (Adjoist); 24 MONTHS \$72,000

DEGENS, EGON T, AND VON HERZEN, RICHARD; GEOPHYSICS AND GEOCHEMISTRY OF EAST AFRICAN LAKES (Adjoint X00); 12 MONTHS \$73,300

BERGGREN, WILLIAM A; CENOZOIC PALEOBIOGEOGRAPHY OF THE ATLANTIC OCEAN-CALCAREOUS PLANKTON (A030723 X00); 12 MONTHS \$49,900

SAYLES, FREDERICK L; SEA WATER - SEDIMENT INTERACTION-THE DIFFUSIVE FLUXES OF IONS BETWEEN THE OCEANS AND THE UNDERLYING SEDIMENTS (AGS1818); 12 MONTHS \$19,160

UCHUPI, ELAZAR, AND BALLARD, ROBERT D; CARBONIFEROUS AND MESOZOIC RIFT STRUCTURES OF THE GULF OF MAINE (A014111); 12 MONTHS \$21,500

WALL, DAVID; BIOLOGY AND PALEONTOLOGY OF MARINE DINOFLAGELLATES AND HYSTRICHOSPHERES (AGGIOC X00°); 12 MONTHS \$28,500

#### **MICHIGAN**

### UNIVERSITY OF MICHIGAN

CALLENDER, EDWARD; COLLABORATIVE RESEARCH ON THE ORIGIN OF PRESHWATER FERROMANGANESE NODULES WITH EMPHASIS ON LAKE MICHIGAN (A01419); 24 MONTHS \$30,000

### NEW YORK

### COLUMBIA UNIVERSITY

YASSO, WARREN E; DOCTORAL DISSERTATION RESEARCH- A STUDY OF THE DISTRIBUTION OF HEAVY METALS IN THE SEDIMENTS OF LOWER NEW YORK HARBOR (A035076); 12 MONTHS \$2,000

### STATE UNIVERSITY AT BINGHAMTON

KISSLING, DON L; STRUCTURE, ECOLOGY, AND DEGRADATION OF THE FLORIDA BARRIER REEF (A01014), 24 MONTHS \$29,400

COLUMBIA UNIVERSITY-LAMONT-DOHERTY GEOLOGICAL

### OBSERVATORY

MCINTYRE, ANDREW, AND RUDDINAN, WILLIAM F; CALCAREOUS PLANKTON FOR PALEOCCEANOGRAPHIC, AND PALEOCCOLOGIC INTERPRETATION (A014177 001); 24 MONTHS \$78,200

HAYS, JAMES D, AND GOLL, ROBERT M; BIOSTRATIGRAPHIC AND TAXONOMIC STUDIES OF LOWER TERTIARY RADIOLARIA (A01718) 009);

STREETER, S STEPHEN, MCINTYRE, ANDREW, AND HAYS, JAMES D, BENTHONIC FORAMINIFERA AND SURFACE SEDIMENTS OF THE NORTH ATLANTIC BASIN (A025414), 12 MONTHS \$18,100

EWING, M; GEOPHYSICAL INVESTIGATIONS ON A RESEARCH VESSEL OF LAMONT-DOHERTY GEOLOGICAL OBSERVATORY (ACCRES) (01); 12 MONTHS \$627,200

EWING, JOHN 1; SURVEYS OF DSDP DRILLING SITES (ACCESSE OCI);

HAYS, JAMES D: STRATIGRAPHIC STUDIES OF DEEP-SEA SEDI-MENTS (A019460 001), 4 MONTHS \$55,200

MENTS (A029160 001); 4 MONTHS \$55,200 OPDYKE, NEIL D. AND LOWRIE, WILLIAM; THE PALEOMAGNETISM AND MAGNETIC PROPERTIES OF MARINE SEDIMENTS (A019518 X00); 12

MONTHS \$36,600
SCHREIBER, EDWARD, AND DALZIEL, IAN; INVESTIGATION OF SOUND VELOCITIES IN OCEANIC ROCKS (AUXOID); 12 MONTHS \$30,000

BRYAN, GEORGE M, AND STOLL, ROBERT D: EFFECTS OF GAS HYDRATES ON PROPERTIES OF MARINE SEDIMENTS (ACCOUNT), 12

MONTHS \$35,100

BE, ALLAN W H, BATTEN, ROGER L, AND FRERICHS, WILLIAM E:
PALEOECOLOGIC AND TAXONOMIC STUDIES OF PLANKTONIC MICRODECAUSES ISSUE SCANNING FRENCH MICROSCOPY.

### PALEOBECOLOGIC AND TAXONOMIC STUDIES OF PLANKTONIC MICRO-ORGANISMS USING SCANNING ELECTRON MICROSCOPY (AGS1888 X00); 12 MONTHS \$51,000

### OHIO

### CASE WESTERN RESERVE UNIVERSITY

DOUGLAS, ROBERT G; CENOZOIC ISOTOPIC TEMPERATURE ANALYSIS IN THE PACIFIC (AGSISTE); 24 MONTHS \$65,100



### CREGON

### OREGON STATE UNIVERSITY

DYMOND, JACK R, AND HEATH, G ROSS; PROVENANCE OF NORTH PACIFIC SEDIMENTS: A GEOCHEMICAL AND MINERALOGICAL VEC-TOR STUDY (AGON) A X00): 12 MONTHS \$48,700

VAN ANDBL, TJEERD H; A STUDY OF THE CENOZOIC DEPOSITIONAL HISTORY OF THE EASTERN EQUATORIAL PACIFIC BASED ON DEEP SEA DRILLING PROJECT CORES (AMILIA); 24 MONTHS \$70,200

KOMAR, PAUL D. AND KULM, LA VERNE D; SEDIMENTARY FACIES AND SEDIMENTARY PROCESSES IN DEEP-SEA CHANNELS, NORTHEAST PACIFIC OCEAN (AGISTICS): 12 MONTHS \$18.700

VAN ANDEL, TJEERD H; DOCTORAL DISSERTATION RESEARCH IN OCEANOGRAPHY (A031074): 24 MONTHS \$6,200

#### PHINISYLVANIA

### DREXEL UNIVERSITY

BUFFET, IRWIN H; DOCTORAL DISSERTATION RESEARCH- IN THE ENVIRONMENTAL SCIENCES (ASSESS), 12 MONTHS \$5,300

### RHOOE ISLAND

### **BROWN UNIVERSITY**

MBRIE, JOHN; ECOLOGY AND PALEOECOLOGY OF PLANKTONIC FORAMINIFERA IN THE INDIAN OCEAN AND INTER-OCEAN FAUNAL COMPARISONS (A012235); 12 MONTHS \$14,600

## UNIVERSITY OF REODE ISLAND

WATKINS, NORMAN D, AND SHAW, F; STUDY OF A POSSIBLE RELATION BETWEEN PALEOCLIMATIC CHANGES AND VOLCANIC PARTICULATE INPUT VARIATION IN HIGH LATITUDES OF THE SOUTH PACIFIC, INDIAN OCEAN, AND NORTH ATLANTIC (A018854 001); 12 MONTHS \$33,600

HAMPTON, MONTY A: TRANSPORT OF OCEAN SEDIMENTS BY DEBRIS FLOW (A033077): 24 MONTHS \$21,500

### UNIVERSITY OF RHODE ISLAND-GRADUATE SCHOOL OF

**OCEANOGRAPHY** 

PILSON, MICHABL E Q: DIFFUSION FROM SEDIMENTS (A023414 001°); 24 MONTHS \$19,100

KRAUSE, DALE C, AND SCHILLING, JEAN-GUY; SUBMARINE GEOLO-GY OF THE AZORES REGION (A090477 X00); 12 MONTHS \$70,900

#### **TEXAS**

### TEXAS A & M UNIVERSITY

PRESLEY, B J; FPHEMERAL PROPERTIES OF INTERSTITIAL WATER FROM THE OCEAN SEDIMENT CORING PROGRAM (A088506 001); 9 MONTHS \$15,500

FAHLQUIST, DAVIS A, AND GANGI, ANTHONY F; HIGH RESOLUTION, DEEP SEISMIC REFLECTION STUDIES IN THE GULF OF MEXICO AND CARIBBEAN (A030126); 12 MONTHS 128,400

### UNIV OF TEXAS AT DALL 48

MITTERER, RICHARD M; INVESTIGATION OF CALCIFICATION MECHANISM IN SKELETAL AND NON-SKELETAL CARBONATES (A090493); 24 MONTHS \$41,300

### WASHINGTON

### UNIVERSITY OF WASHINGTON

SMITH, J DUNGAN; A FIELD INVESTIGATION OF TIDAL AND RIVER FLOW OVER NON-UNIFORM BOUNDARIES (A)14178 008°); 24 MONTHS \$64,600

LING, HSIN YI; SILICOFLAGELLATES FROM THE NORTHWESTERN PACIFIC DEEP-SEA CORE SEDIMENTS (A01419 001); 12 MONTHS \$27,700 LISTER, C R B; HEAT-FLOW VARIATIONS ACROSS TRANSFORM FAULTS AND AT RIDGE JUNCTIONS (A01717 001); 12 MONTHS \$27,000

CREAGER, JOE S; STRATIGRAPHY OF THE UNCONSOLIDATED SEDI-MENTS ON THE CONTINENTAL SHELVES OF THE LAPTEY, EAST SIBERIAN AND BERING SEAS (A01800) 001); 12 MONTHS \$84,200

STERNEERG, RICHARD W; FIELD INVESTIGATIONS OF BOUNDARY-LAYER FLOW AND SEDIMENT TRANSPORT IN THE SHALLOW MARINE

ENVIRONMENT (A218941 001); 12 MONTHS \$23,600
MCMANUS, DEAN A; TRANSPORTATION, DEPOSITION, AND ACCUMULATION OF FINE-GRAINED SEDIMENT ON A DEEP-SEA FAN (A010317); 13 MONTHS \$56,500

CARPENTER, ROY, AND PIPER, DAVID Z; GEOCHEMICAL STUDIES OF FERROMANGANESE NODULES AND ASSOCIATED SEDIMENTARY PHASES (A030518); 12 MONTHS \$28,900

ECHOLS, RONALD J; STUDIES OF ARCTIC SUBLITTORAL FORAMINIFERA (A0J1009); 12 MONTHS \$20,500

### WISCONSIN

### UNIVERSITY OF WISCONSIN, MADISON

BOWSER, CARL J. COLLABORATIVE RESEARCH ON THE ORIGIN OF FRESHWATER FERROMANGANESE NODULES WITH EMPHASIS ON LAKE MICHIGAN (A031440); 24 MONTHS \$34,700

### WYOMING

### UNIVERSITY OF WYOMING

DREVER, JAMES 1: DIAGENETIC REACTIONS OF SILICATES IN CORES TAKEN BY THE DEEP SEA DRILLING PROJECT (ACMINGS); 24 MONTHS 824800

### **BIOLOGICAL OCEANOGRAPHY**

#### ALASKA

### UNIVERSITY OF ALASKA-INSTITUTE OF MARINE SCIENCE

MCROY, C PETER; PRODUCTIVITY AND NUTRIENT CYCLING OF SEA GRASSES (A030480), 24 MONTHS \$45,200

MCROY, C PETER, AND GOERING, JOHN J; OCEANOGRAPHY OF THE BERING SEA-PHASE II-PRIMARY PRODUCTIVITY AND FOOD CHAINS OF MARINE MANMALS (AUSIAS); 12 MONTHS \$76,000 MCAOY, C PETER, AND GOERING, JOHN J; OCEANOGRAPHY OF THE

MC.AOY, C PETER, AND GOERING, JOHN J; OCEANOGRAPHY OF THE BERING SEA: PHASE II- PRIMARY PRODUCTIVITY AND FOOD CHAINS OF MARINE MAMMALS (A03387 0019); \$0

#### CALIFORNIA

## CALIFORNIA INSTITUTE OF TECHNOLOGY

LOWENSTAM, HEINZ A: NON-CARBONATE MINERALS PRECIPITATED BY MARINE ORGANISMS (A096131 001); 12 MONTHS 850,000

### CALIFORNIA STATE UNIVERSITY, SAN DIEGO

EBERT, THOMAS A; THE ROLE OF SEA URCHINS IN THE KELP-BED COMMUNITY (AGGGOD); 24 MONTHS \$51,400

### STANFORD UNIVERSITY

GILMARTIN, MALVERN, AND KVEDER, SERGIJE; PRIMARY PRODUCTION OF THE NORTHERN ADRIATIC SEA (A01111 X00): 15 MONTHS \$44.500

### UNIVERSITY OF CALIFORNIA, DAVIS

HAMNER, WILLIAM M 111; NATURAL HISTORY OF BLUE WATER PLANKTON (AGS1417); 18 MONTHS \$41,700

### UNIVERSITY OF CALIFORNIA, IRVINE

STEPHENS, GROVER C, AND NORTH, BARBARA B; ROLE OF DIS-SOLVED ORGANIC NITROGEN IN MARINE PHYTOPLANKTON NUTRI-TION (AGSJØD) X00); 12 MONTHS \$38,800

### UNIVERSITY OF CALIFORNIA, SAN DIEGO

THOMAS, WILLIAM H; EFFECTS OF NUTRIENTS ON THE GROWTH OF MARINE PHYTOPLANKTON (AGS1829 XOO); 12 MONTHS \$\$4,000

BEERS, JOHN R, AND MULLIN, MICHAEL M; HOLOGRAPHIC INSTRU-MENTATION FOR MARINE PLANKTON STUDIES (AGJ1439), 18 MONTHS \$35,000

### University of California, Santa Barbara

CHILDRESS, JAMES J; STUDIES ON THE ECOLOGICAL PHYSIOLOGY OF MIDWATER CRUSTACEANS (Addition): 24 MONTHS \$76,200

NOBLE, ELMER R; PARASITISM IN DEEP BENTHIC MARINE FISHES (Addits); 24 MONTHS \$58,000

### UNIVERSITY OF CALIFORNIA, SANTA CRUZ

PIERCE, RICHARD W; COMPARATIVE STUDY OF PHYSIOLOGICAL ADAPTATIONS OF MARINE MAMMALS (A01227); 24 MONTHS \$50,800

### STANFORD UNIVERSITY-HOPKINS MARINE STATION

GILMARTIN, MALVERN; DOCTORAL DISSERTATION RESEARCH ON A STUDY OF THE WATER MASS PHENOMENON AND ITS EFFECTS ON THE COMPOSITION OF COMMUNITIES OF MIDWATER FISHES (A010185); 18 MONTES \$1,200

LEE, WELTON L; DOCTORAL DISSERTATION RESEARCH IN BIOLOGI-CAL OCEANOGRAPHY (A03114); 24 MONTHS \$1,200

# UNIVERSITY OF CALIFORNIA, SAN DIEGO-SCRIPPS INSTITUTION OF

DAYTON, PAUL K; FUNCTIONAL STUDIES OF THE ORGANIZATION OF KELP COMMUNITIES (A030877); 24 MONTHS \$69,100

FLEMINGER, ABRAHAM; DISTRIBUTION AND BIOLOGY OF PACIFIC ZOOPLANKTON (A031094); 12 MONTHS \$18,800

MCGOWAN, JOHN A; ECOLOGY OF SMALL SQUID IN THE EPIPELAGIC ZONE OF THE EASTERN TROPICAL PACIFIC (A031095); 12 MONTHS 19 900

EPPLEY, RICHARD W; KINETICS OF NITROGEN ASSIMILATION BY MARINE PHYTOPLANKTON (AGJ1167 X00); 12 MONTHS \$66,800

HESSLER, ROBERT B; STUDIES ON THE DEEP-SEA BENTHOS (A031244 X20), 12 MONTHS \$59,100

BADA, JEFFREY L; AMINO ACIDS IN SEA WATER (AGSIDS); [2 MONTHS \$33,100

BRINTON, EDWARD; DISTRIBUTION, LIFE HISTORIES, AND BIOLOGY OF EUPHAUSIACEA AND SERGESTIDAE (AGS1783); 24 WONTHS \$86,200 HESSLER, ROBERT R; DOCTORAL DISSERTATION RESEARCH: IN-

VESTIGATIONS OF TEMPORAL AND SPATIAL VARIATION IN THE DEEP SEA BENTHOS (AGILLE): 24 MONTHS \$4,200



LEWIN, RALPH A; LEAD- ITS EFFECTS ON MARINE PHYTOPLANX-TON (A031890); 24 MONTHS \$49,700

GAREY, WALTER F; ADMINISTRATIVE AND SUPPORT FUNCTIONS OF THE ALPHA HELIX RESEARCH PROGRAM (AGGIGE); 12 MONTHS \$20,000

BENSON, ANDREW A; WAX ESTERS IN THE ECONOMY OF MARINE ECOSYSTEMS (BOT1834 001); \$10,000

## UNIVERSITY OF THE PACIFIC PACIFIC MARINE STATION

BLAKE, JAMES A: LARVAL DEVELOPMENT OF MARINE INVER-TEBRATES PROM THE NORTHERN CALIFORNIA COAST (AGJ0900); 24 MONTHS \$44,000

OBREBSEI, STEVEN; POPULATION INTERACTIONS IN TWO MARINE TREMATODE MOLLUSC PARASITE-HOST SYSTEMS (AGMISS); 24 MONTHS \$43,000

### CONNECTICUT

### HASKINS LABORATORIES INC

PROVASOLI, LUIGI; NUTRITIONAL RELATIONSHIPS AMONG MARINE ORGANISMS (A01940 X00), 12 MONTHS \$96,400

## UNIVERSITY OF CONNECTICUT

FRANKEL, LARRY; COMMUNITY TROPHIC STRUCTURE OF ESTUARINE FORMMINIFERA (AGISCOT); 24 MONTHS \$15,400

#### YALB UNIVERSITY

HARTMAN, WILLARD D; DOCTORAL DISSERTATION RESEARCH IN BIOLOGICAL OCEANOGRAPHY (A030979): 24 MONTHS \$2,600

### DISTRICT OF COLUMBIA

## DEPARTMENT OF NAVY-OFFICE OF NAVAL RESEARCH

KIRWAN, A DENNIS; SUPPORT OF THE COMMITTEE ON OCEANOG-RAPHY OF THE NATIONAL ACADEMY OF SCIENCES (AGOOM); 12 MONTHS \$5,000

#### FLORIDA

### PLORIDA STATE UNIVERSITY

HERRNKIND, WILLIAM F; INVESTIGATIONS OF EMIGRATIONS OF SPINY LOBSTERS, 'PANULIRUS ARGUS' (AGIOSIS); 12 MONTHS \$36,600

### UNIVERSITY OF SOUTH FLORIDA

SIMON, JOSEPH L; REPOPULATION OF AN INTERTIDAL COMMUNITY (AGJ1849); 24 MONTHS \$30,700

# UNIVERSITY OF FLORIDA-ENGINEERING & INDUSTRIAL EXPERIMENT STATION

ODUM, HOWARD T; ENERGY CIRCUIT MODEL AND SIMULATION OF THE SYSTEM OF THE GULF SHELF (A022722 001); \$3,400

### UNIVERSITY OF FLORIDA-PLORIDA STATE MUSEUM

DEEVEY, GEORGIANA B; STUDIES ON DEEP-WATER ZOOPLANKTON (AGI1736); 12 MONTHS \$22,000

# UNIVERSITY OF MIAMI-SCHOOL OF MARINE AND ATMOSPHERIC SCIENCES

REEVE, MICHAEL R; EXPERIMENTAL STUDIES ON THE BIOLOGY OF CHAETOGNATHS AND OTHER MARINE PLANKTONIC CARNIVORES (A011512 X01): 12 MONTHS \$68,100

FELL, JACK W; BIOLOGY OF MARINE HETEROBASIDIOMYCETOUS FUNGI (A018710 001); \$3,600

HOUDE, EDWARD D. GROWTH AND SURVIVAL OF LABORATORY-REARED FISH LARVAS (AGS1138), 12 MONTHS \$42,000

ZILLIOUX, EDWARD J: PRIMARY PLANKTONIC HETEROTROPHS (P218418 003); 24 MONTHS \$91,400

### Georgia

## UNIVERSITY OF GEORGIA

PAYNE, W J; NITRATE RESPIRATION AND NAG INFLUENCE IN MARINE BACTERIA (AGJ3261): 24 MONTHS \$50,700

### HAWAII

### UNIVERSITY OF HAWAIL

GUNDERSEN, KAARE R; BIOLOGICAL NITROGEN TRANSFORMA-TIONS IN THE NORTH CENTRAL PACIFIC OCEAN (A017288 001); 6 MONTHS \$20,500

CHAVE, KEITH E, AND KAY, E ALISON; ECOLOGICAL AND GEOLOGI-CAL STUDIES OF FANNING ISLAND (AGIJI1\*); 12 MONTHS \$21,650

YOUNG, RICHARD E; ASPECTS OF THE ECOLOGY OF MID-WATER CEPHALOPODS FROM THE WATERS OFF OAHU, HAWAII (AGJI419); 24 MONTHS \$54,700

### LOUISIANA

## LOUISIANA STATE UNIVERSITY, BATON ROUGE

PERKINS, BOB F; DOCTORAL DISSERTATION RESEARCH IN OCEANOGRAPHY (AGS 1105°); 24 MONTHS \$4,300

### MARYLAND

## JOHNS HOPKINS UNIVERSITY

TAYLOR, W ROWLAND, THE ROLE OF DIFFERENT NITROGENOUS NUTRIENTS IN THE PLANKTON ECOLOGY OF THE CHESAPEAKE BAY (A031445), 12 NONTHS \$43,400

## UNIVERSITY OF MARYLAND, BALTIMORE COUNTY

BRADLEY, BRIAN P. POPULATION BIOLOGY OF AN ESTUARINE COPEPOD (A013638); 12 MONTHS \$30,300

# UNIVERSITY OF MARYLAND, COLLEGE PARK

VERNEIJ, GEERAT J; AN ANALYSIS OF INTERTIDAL MOLLUSCAN MORPHOLOGY (AGJ1777); 24 MONTHS \$22,400

#### MASSACHUSETTS

### BOSTON UNIVERSITY

GOLUBIC, STJEPKO; ECOLOGY OF MARINE ENDOLITHIC ALGAE (AGJ1168); 12 MONTHS \$21,900

## MARINE BIOLOGICAL LABORATORY

BOSCH, HERMAN F; INVESTIGATION INTO THE BIOLOGY AND LABORATORY CULTURE OF MARINE CLADOCERA (A014130); 12 MONTHS \$18,600

### UNIVERSITY OF MASSACHUSETTS, DOSTON

YENTSCH, CHARLES S; NITROGEN UPTAKE BY FUCUS SPIRALIS L. AND OTHER SELECTED MARINE MACROALGAE (A03145); 24 MONTHS \$36,300

## WOODS HOLE OCEANOGRAPHIC INSTITUTION

TEAL, JOHN M; COLLABORATIVE RESEARCH IN STRUCTURE, FUNC-TION AND EXPORT OF A SALT WARSH ECOSYSTEM (A01814) 001); 18,100

JANNASCH, HOLGER W; STUDINS ON THE MICROBIAL OXIDATION OF SULFUR COMPOUNDS IN MARINE ENVIRONMENTS (A020645 XeI); 12 MONTHS \$40,000

HONJO, SUSUMU; BIOGEOGRAPHY, TAXONOMY AND ECOLOGY OF COCCOLITHOPHORIDS IN THE PACIFIC OCEAN (AGGOSSO); 24 MONTHS \$70,000

SANDERS, HOWARD L; MARINE BENTHIC BIOLOGY - OCEAN FLOOR ECOLOGY (A03105); 12 MONTHS \$151,000 SANDERS, HOWARD L; MARINE BENTHIC BIOLOGY - OCEAN FLOOR

ECOLOGY (AGMIGS 001); \$2,300 HAEDRICH, RICHARD L. AND ROWE, GILBERT T; ECOLOGY OF SUB-

MARINE CANYONS (ACS1235 X00): 12 MONTHS \$60,000 BACKUS, RICHARD H; DISTRIBUTION OF MESOPELAGIC FISH IN THE

ATLANTIC OCEAN (A031383 X00); 12 MONTHS \$118,400
KANWISHER, JOHN W; BIOLOGICAL INSTRUMENTATION (A031387 X00); 12 MONTHS \$59,500

GUILLARD, ROBERT R L; COMPARATIVE ENVIRONMENTAL PHYSIOLOGY OF MARINE PHYTOPLANKTON (AG31288); 24 MONTHS \$124.100

JANNASCH, HOLGER W; MICROBIAL TRANSFORMATIONS IN SEA-WATER (A031403 X00); 12 MONTHS \$66,000

VACCARO, RALPH F; HETEROTROPHIC ACTIVITY AND THE DISTRIBUTION OF ORGANIC DERIVATIVES IN THE SEA (AGJ119); 12 MONTHS \$45,000

WALL, DAVID; BIOLOGY AND PALEONTOLOGY OF MARINE DINOFLAGELLATES AND HYSTRICHOSPHERES (AGMIGE X00°); 12 MONTHS \$28,500

VACCARO, RALPH F; HETEROTROPHIC ACTIVITY AND DISTRIBU-TION OF DISSOLVED ORGANIC CARBON IN THE SEA (BOISSES DOI); \$550

### MICHIGAN

### UNIVERSITY OF MICHIGAN

MOZLEY, SAMUEL C; PONTOPOREIA AFFINIS AND OTHER BENTHOS IN LAKE ONTARIO (AGSELO); 18 WONTHS \$39,000

### NEW HAMPSHIRE

## UNIVERSITY OF NEW HAMPSHIRE, DURHAM

CROKER, ROBERT A; POPULATION STUDIES OF EPIFAUNAL AND IN-FAUNAL MARINE AMPHIPOD CRUSTACEANS (AGJILI); 24 MONTHS \$48,200

JONES, GALEN E; THE DISTRIBUTION OF TRACE ELEMENTS IN MARINE BACTERIA (A034101); 12 MONTHS \$43,200

### NEW JERSEY

## RUTGERS UNIVERSITY

LITCHFIELD, CAROL D. THE DISTRIBUTION OF HETEROTROPHIC BACTERIA AND MINERALIZATION IN MARINE SEDIMENTS (ACISELO); 24 MONTHS \$44,000

### **NEW MEXICO**

## UNIVERSITY OF NEW MEXICO

CLARK, GEORGE R II; STUDIES IN MOLLUSCAN ECOLOGY (A035494); 12 MONTHS \$27,600



### NEW YORK

### BROOKHAVEN LABORATORY

WOODWELL, G M, RICH, P H, HEUSSER, C S, AND HALL, C A S; CAR-BON BUDGET OF PLAX POND ESTUARY, LONG ISLAND, NEW YORK (AG06124): 94 MONTHS \$910,000

### CITY COLLEGE

LEE, JOHN J. AND ROSS, GEORGE G. EDUCING AND MODELING THE FUNCTIONAL RELATIONSHIPS WITHIN SUBLITTORAL SALT MARSH PPIPHYTIC COMMUNITIES (ACCUSED): 24 MONTHS \$211,800

### NEW YORK 200LOGICAL SOCIETY

GOLD, KENNETH; BACTERIAL ENDOSYMBIONTS AS A POSSIBLE BLOOM MECHANISM IN MARINE DINOFLAGELLATES (AGJIST): 12 MONTHS \$35,100

### STATE UNIVERSITY AT SYONY RECOK

LEVINTON, JEFFREY S: GENETIC-ADAPTIVE STRATEGIES OF MARINE BIVALVIA IN GRADIENTS OF ENVIRONMENTAL VARIABILITY (A038481); 12 MONTHS \$24,000

### COLUMBIA UNIVERSITY-LAMONT-DOHERTY GEOLOGICAL OBSERVATORY

BE, ALLAN W H, AND IMBRIE, JOHN; THE ECOLOGY AND OCEANIC DISTRIBUTIONS OF PLANKTONIC FORAMINIFERA (ADJELES); 12 MONTHS \$35,000

#### **NORTH CAROLINA**

## DUKE UNIVERSITY-MARINE LABORATORY

BARBER, RICHARD T; RESEARCH AND TRAINING PROGRAM INVOLV-ING RIV EASTWARD (AGETTES OOI), 12 MONTHS \$154.700

COSTLOW, JOHN D. AND JOHNSON, CHARLES A: LIFE HISTORY STU-DIES OF PROTOZOAN PARASITES IN THE BLUE CRAB, CALLINECTES SAPIDUS' (A030941): 12 MONTHS \$22 200

SUTHERLAND, JOHN P. AND KELLOGG, CHARLES W; COMPETITIVE STRUCTURE OF HERMIT CRAB COMMUNITIES (Adsesse); 12 MONTHS E18 90A

### OREGON

### OREGON STATE UNIVERSITY

MCINTIRE, C DAVID: PHYSIOLOGICAL ECOLOGY OF THE ATTACHED DIATON ASSEMBLAGES OF YAQUINA ESTUARY, OREGON (ACIDEII); 24 MONTHS \$52,600

SMALL, LAWRENCE F; FEEDING AND ASSIMILATION NICHES FOR MARINE MICROCRUSTACEA (A033830); 24 MONTHS \$84,000

### RHODE ISLAND

### UNIVERSITY OF RHODE ISLAND-GRADUATE SCHOOL OF **OCEANOGRAPHY**

SWIFT, ELIJAH; BIOLOGY OF 'PYROCYSTIS'- AN DINOFLAGELLATE (A0JOSSI); 24 MONTHS \$39,600

SWAYDA, THEODORE J; THE CAUSES OF PHYTOPLANKTON SUCCES. SION AND BLOOMS IN NARRAGANSETT BAY (A031318 X00); 12 MONTHS

SIEBURTH, JOHN MCNEILL; THE ALGAL-MICROBIAL FOOD BASE (A051116); 24 MONTHS \$81,500

### VIRGINIA

### COLLEGE OF WILLIAM AND MARY

MANGUM, CHARLOTTE P: ADAPTATIONS OF MARINE INTERTIDAL INVERTEBRATES TO LOW OXYGEN CONDITIONS (ACHER): 24 MONTHS \$30,600

### OLD DOMINION UNIVERSITY

MARSHALL, HAROLD G: THE DISTRIBUTION AND ECOLOGY OF PHYTOPLANKTON IN THE COASTAL WATERS OF EASTERN UNITED STATES (A011768); 24 MONTHS \$26,000

### UNIVERSITY OF VIRGINIA

ODUM, WILLIAM E. AND ZIEMAN, JOSEPH C; THE BASIS FOR AN ECOLOGICAL COMPARISON OF ESTUARINE MARSHES (A034100), 24 MONTHS \$49,900

## VIRGINIA INSTITUTE OF MARINE SCIENCE

PERKINS, FRANK O; MARINE COCCOID FUNGI AND PROTOZOA OF THE LOWER CHESAPEAKE BAY, VIRGINIA (AGJICIL); 24 MONTHS 446,900 KAZAMA, FREDERICK Y; FUNGI ASSOCIATED WITH DECAYING 'SPARTINA' SP (A031899); 24 MONTHS \$26,300

### WASHINGTON

## UNIVERSITY OF WASHINGTON

PAINE, ROBERT T; FAUNAL AND TROPHIC STUDIES OF AN INTER-TIDAL COMMUNITY (A023349 001); 24 MONTHS \$37,700

THOMAS, JAMES P; RELEASE, ASSIMILATION, AND OXIDATION OF PHYTOPLANKTON-DERIVED DISSOLVED ORGANIC MATTER (A010880); 24 1'ONTHS \$25,500

BANSE, KARL: ROLE OF SPECIES IN ENERGY BUDGETS OF MARINE COMMUNITIES (AGSOSIS); 24 MONTHS \$55,800

TROST, BRUCE W; ECOLOGICAL STUDIES ON SIBLING SPECIES OF MARINE PLANKTONIC COPEPODS (A030941): 18 MONTHS \$20,000

DUGDALE, RICHARD C: PHYTOPLANKTON AND HERBIVOROUS ZOOPLANKTON PRODUCTION PROCESSES IN THE SEA (A01001); 12 MONTHS \$182,000

PACKARD, T T: A STUDY OF THE RATES AND REGULATION OF BIOLOGICAL PROCESSES IN THE OCEAN, THROUGH ANALYSIS OF THE CONTROLLING ENZYMES (A014141): 24 MONTHS \$22 100

### MATERIALS

## SOLID STATE PHYSICS

## ARIZONA

### ARIZONA STATE UNIVERSITY

PAGE, JOHN B JR, AND WALKER, CHARLES T; EXPERIMENTAL AND THEORETICAL STUDIES OF LATTICE VIBRATIONS IN SOLIDS (HOSISIS); 12 MONTHS \$40 000

## UNIVERSITY OF ARIZONA

SERAPHIN, BERNIIARD O; FIRST INTERNATIONAL CONFERENCE ON MODULATION SPECTROSCOPY (HOSSESA); 12 MONTHS \$7,000 SERAPHIN. B O: ELECTROREFLECTANCE STUDIES OF METALS (HOJ4576); 12 MONTHS \$30,000

### CAHGOSHIA

## CALIFORNIA INSTITUTE OF TECHNOLOGY

GOODSTEIN, DAVID L: STUDIES IN TWO DIMENSIONAL HELIUM (HOJ1688): 12 MONTHS \$31,800

GEBALLE, T H; HIGH-SPEED HIGH-RESOLUTION THERMAL IN-VESTIGATIONS AT LOW TEMPERATURES (HOSISI); 24 MONTHS \$59,700

## UNIVERSITY OF CALIFORNIA, BERKELEY

KNIGHT, WALTER D. AND PORTIS, ALAN M; RESONANCE STUDIES OF METALLIC PARTICLES AND SURFACES (HOSESIT): 12 MONTHS \$78,50 FALICITY, L M; THEORETICAL RESEARCH ON THE ELECTRONIC PROPERTIES OF SOLIDS (HOS LIST); 24 MONTHS \$77,000

KITTLL, CHARLES, AND COHEN, MARVIN L; THEORETICAL SOLID STATE PHYSICS (POISSE 001); 6 MONTHS \$17,800

REIF. F. AND PACKARD.

RICHARD E: LOW TEMPERATURE RESEARCH (POISELS 001); 24 MONTHS \$75,700 HAHN, ERWIN L; COHERENT OPTICAL PHENOMENA AND SOLID

STATE SPIN RESONANCE (POISISS OCI); PA MONTHS \$162,100

### UNIVERSITY OF CALIFORNIA, IRVINE

PELLAM, JOHN R; LOW TEMPERATURE PHYSICS (PO10698 008); 24 MONTHS #103 600

## University of California, los angeles

ORBACH, R; AN EXPERIMENTAL STUDY OF LOCALIZED MOMENTS IN METALS (HOJ1913); 24 MONTHS \$111,000

HOLSTEIN, T, ORBACH, RAYMOND L, AND PINCUS, P; THEORETICAL STUDY OF THE PROPERTIES OF SOLIDS (POLICE 001): 12 MONTHS \$61,200

## UNIVERSITY OF CALIFORNIA, SAN DIEGO

GOODKIND, JOHN M: EXPERIMENTS WITH QUANTUM FLUIDS (HOJ1680): 24 MONTHS \$128,800

SCHULTZ, SHELDON, AND FEHER, GEORGE; EXPERIMENTAL SOLID STATE RESEARCH (HOJ1741); 12 MONTHS \$106,200

SHORE, HERBERT B; THEORY OF INTERACTIONS BETWEEN LAT-TICE VIBRATIONS AND IMPURITIES IN SOLIDS (HOSLUS); 24 MONTHS 120,500

## UNIVERSITY OF CALIFORNIA, SANTA BARBARA

BARRETT, PAUL H; MOSSBAUER STUDIES OF MATRIX ISOLATED ATOMS (HOJ185J); 24 MONTHS \$90,800

WALKER, W C; ELECTRONIC EXCITATIONS IN CONDENSED MATTER (Hossos); 12 MONTHS \$28,200

CANNELL, DAVID S; LIGHT SCATTERING STUDIES OF CRITICAL SYSTEMS (HOJI 140); 24 MONTHS \$51,800

## UNIVERSITY OF CALIFORNIA, SANTA CRUZ

BRIDGES, FRANK; PARAELECTRIC STUDIES IN INSULATORS (HOJ 1649); 24 MONTHS \$35,100

## UNIVERSITY OF SOUTHERN CALIFORNIA

PORTO, SERGIO P S; LASER EXCITED SPECTROSCOPY OF SOLIDS (HOJ1770); 12 MONTHS \$72,900

FAUST, WALTER L: PHYSICS EXPERIMENTS WITH LASER OPTICAL SOURCES (HOSEROI): 12 MONTHS \$27,300 HU, CHIA-BEN; MICROSCOPIC INVESTIGATION OF SPACE-AND TIME-

dependent superconductivity (hospos); 24 months \$25,100



KIM, YOUNG B: METALLURGICAL MICROSTRUCTURE STUDIES OF HIGH-PIELD SUPERCONDUCTORS AND RARE EARTH COBALT MAG-NETIC MATERIALS (HOSSESS); 12 MONTHS \$65,000

### COLORADO

UNIVERSITY OF COLORADO

EROPSCHOT, RICHARD H; THE THIRTEENTH INTERNATIONAL CON-PERENCE ON LOW TEMPERATURE PHYSICS (HOJISTI); 6 MONTHS \$8,700 SCOTT, JAMES F; LIGHT SCATTERING STUDIES OF ANOMALOUS PHASE TRANSITIONS IN INSULATORS AND OF BLECTRON SPIN-FLIP IN WIDE BANDGAP SEMICONDUCTORS (HOLLES); 24 MONTHS \$65,000

UNIVERSITY OF DENVER DENVER RESEARCH INSTITUTE

CARPENTER, STEVE H: A STUDY OF INTERSTITIAL DISLOCATION IN-TERACTIONS IN THE BODY-CENTERED CUBIC METALS (POSPESS 001); \$3,800

#### CONNECTICUT

WESLEYAN UNIVERSITY

TREFNY, JOHN U; HEAT PULSE STUDIES IN SOLIDS (HOSPILL); 24 MONTHS \$77,700

VALE UNIVERSITY

WOLF, WERNER P; MAGNETIC CRYSTALS WITH WEAK INTERAC-TIONS (HOSSILT): 13 MONTHS \$55,500 WOLP, WERNER P; MAGNETIC CRYSTALS WITH WEAK INTERAC-

TIONS (HOSSIST 001): \$6,400

WEATRE, DENIS L; THEORETICAL INVESTIGATIONS OF CRYSTAL STRUCTURES OF SOLIDS (POSSSS); 24 MONTHS \$11,900

### DELAWARE

UNIVERSITY OF DELAWARE

DANIELS, WILLIAM B, RARE GASES AND OTHER SIMPLE SYSTEMS AT HIGH PRESSURES (HOJELDI X00); 12 MONTHS \$55,000

BOER, PARL W; FIELD - AND CURRENT - INSTABILITIES (HOS 1400); 12 MONTHS \$23,900

MURRAY, R B; CHANNELING AND RADIATION-INDUCED DEFECTS IN ALKALI HALIDE CRYSTALS (HOJ4571); 23 MONTHS \$62,200

### DISTRICT OF COLUMBIA

AMBRICAN UNIVERSITY

CALLEN, EARL; MAGNETIC SEMICONDUCTORS AND MAGNETIC PRO-PERTIES OF METAL-METAL TWO-PHASE MIXTURES (HOJIGET); 12 MONTHS \$18,000

GEORGETOWN UNIVERSITY

CLINTON, WILLIAM L, AND GREGORY, WILLIAM D; SOLID STATE PROPERTIES OF METALS VIA TUNNELING INTO SINGLE CRYSTALS-AN INTEGRATED THEORETICAL AND EXPERIMENTAL INVESTIGA-TION (HOS1463): 12 MONTHS \$35,000

HOWARD UNIVERSITY

CHUNG, DAVID Y; (Y010456); 21 MONTHS \$18,700

PLORIDA AGRICULTURAL AND MECHANICAL UNIVERSITY

CARR JR, SLADE L; BLACK COLLEGES (FOUR-YEAR) (Y01011): 12 MONTHS \$9.400

JAIN, BUBU L; BLACK COLLEGES (FOUR-YEAR) (YO10445); 12 MONTHS \$10 R00

UNIVERSITY OF PLORIDA

BROYLES, ARTHUR A; FLUIDS AS NUCLEI AND ELECTRONS (H091618); 24 MONTHS \$56,100

SLATER, JOHN C; QUANTUM THEORY OF MOLECULES' AND SOLIDS (HoJ2004); 24 MONTHS \$107,100

SCOTT, T A, AND ADAMS, E D; HIGH PRESSURE AND LOW TEMPERA. TURE STUDIES OF CONDENSED MATTER (POISSES 001); 24 MONTHS \$115,100

### GEORGIA

GEORGIA INSTITUTE OF TECHNOLOGY

GERSCH, HAROLD A; DYNAMICAL BEHAVIOR OF MANY PARTICLE SYSTEMS (HOJST 15): 24 MONTHS \$32,700

UNIVERSITY OF GEORGIA

RIVES, JOHN E; LOW TEMPERATURE STUDIES ON MAGNETIC INSU-LATORS (HOTEETS); 24 MONTHS \$42,100

LANDAU, DAVID P; MONTE CARLO STUDIES OF MAGNETIC SYSTEMS (HOFILIE); 24 MONTHS \$16,100

### **HUNOIS**

NORTHERN ILLINOIS UNIVERSITY

KIMBALL, CLYDE W; INTERMEDIATE PHASES OF BINARY RARE EARTH ALLOYS (HOSILIO); 12 MONTHS \$19,000

NORTHWESTERN UNIVERSITY

MARCUS, JULES A: EXPERIMENTAL DETERMINATION OF THE ECTRONIC PROPERTIES AND STRUCTURE OF METALS (HOUME); MA MONTHS \$58,700

FREEMAN, ARTHUR J: ELECTRONIC PROPERTIES OF HEAVY METALS AND THEIR COMPOUNDS (HOSSIES); 12 MONTHS \$38,500

Southern Illinois University - Carbondale

BALDWIN, THOMAS O; OBSERVATIONS OF DEFECTS IN NEARLY PER-FECT CRYSTALS BY X-RAY DIFFRACTION TECHNIQUES (HOSIST); 12 MONTHS \$10,000

UNIVERSITY OF ILLINOIS AT URBANA

SATTERTHWAITE, CAMERON B; STUDIES OF SUPERCONDUCTIVITY IN METAL-HYDROGEN SYSTEMS (HOJSSEI); 12 MONTHS \$40,500

SALAMON, MYRON B; COMPARATIVE CRITICAL POINT MEASURE. MENTS (HOS3750); 24 MONTHS \$29,700

EHRLICH, GERT: NINETEENTH FIELD EMISSION SYMPOSIUM (HOJ4749); 12 MONTHS \$1,500

BAYM, GORDON, AND WORTIS, MICHAEL; PROPERTIES OF SOLIDS AND MANY PARTICLE SYSTEMS (POISSE 001°); 24 MONTHS \$39,550

#### INDIANA

INDIANA UNIVERSITY, BLOOMINGTON

HAKE, RICHARD R; EXPERIMENTAL INVESTIGATION OF PHASE-, TRANSITION PHENOMENA IN TYPE-II SUPERCONDUCTORS (HOSSOS); 24 MONTHS \$53 700

CHASE, LLOYD L; RAMAN SCATTERING IN SOLIDS (HOSSIGE); 24

MONTHS \$63,100 BRON, W E; APPLICATIONS OF ELECTRON-LATTICE COUPLING TO DYNAMICAL PHENOMENA IN CRYSTALS (HOSISET); 24 MONTHS \$87,800

PURDUE UNIVERSITY

FISHER, P. RAMDAS, A K, AND RODRIGUEZ, S; ELECTRONIC AND VIBRATIONAL SPECTRA OF SOLIDS (HOJEOD); 24 MONTHS \$78,500

MULLEN, JAMES G: MOSSBAUER AND DIFFUSION STUDIES IN SOLIDS (Hossoos); 12 MONTHS \$35,900

BRAY, RALPH; BRILLOUIN SCATTERING STUDIES OF PHONON IN-TERACTIONS IN PIEZOELECTRIC SEMICONDUCTORS (HOSSILL X00): 12 MONTHS \$40 700

SLADEK, R J. ULTRASONIC STUDIES OF AMORPHOUS SOLIDS AND OF SOLIDS EXHIBITING A METAL-NONMETAL TRANSITION (HOSSES): 12 MONTHS \$32,500

ASCARELLI, G, AND RODRICUEZ, S; THE F-CENTER IN THE ALKALI HALIDES, THE BAND STRUCTURE OF SILVER HALIDES AND IMPURI-TY STATES IN SEMICONDUCTORS (HOSSITS); 18 MONTHS \$30,400

KEESOM, P H; SPECIFIC HEAT OF SUPERCONDUCTIVE OSMIUM AND OF NIOBIUM IN THE MIXED STATE (HOJ4603); 24 MONTHS \$30,800

GERRITSEN, A N: TRANSPORT PROPERTIES OF DILUTE CADMIUM AND MAGNESIUM ALLOYS (POIZESS 001); 24 MONTHS \$65,700

MIEHER, ROBERT LEE; ENDOR AND OPTICAL STUDIES OF IMPURI-TIES AND DEFECTS IN CRYSTALLINE SOLIDS (POISTED COI); 24 MONTHS \$70,000

UNIVERSITY OF NOTRE DAME

TOMASCH, WALTER J: ELECTRONIC TUNNELING FROM METALS (QUASIPARTICLE INTERFERENCE EFFECTS) (Hosisia); 24 MONTHS \$51,000

### **IOWA**

UNIVERSITY OF IOWA

SAVAGE, WILLIAM R; LOCALIZED MOMENTS ARISING FROM MAGNETIC IMPURITIES IN METALLIC SAMPLES (HOJAJSS): 12 MONTHS \$31,100

### KANSAS

UNIVERSITY OF KANSAS

CULVAHOUSE, J W: SPIN-SPIN INTERACTIONS IN INSULATING SOLIDS (HO34588); 24 MONTHS \$68,400

## KENTUCKY

UNIVERSITY OF KENTUCKY

CHRISTOPHER, JOHN E, AND GOSSICK, BEN R; RADIATION DAMAGE IN SEMICONDUCTORS (HOSisson), 12 MONTHS \$27,200

### AMAIZRIOJ

LOUISIANA STATE UNIVERSITY, BATON ROUGE

GRENIER, C G; ELECTRON-PHONON AND ELECTRON-ELECTRON IN-TERACTIONS IN METALS AND SEMICONDUCTORS (HOMERUS); 24 MONTHS

ZEBOUNI, N H; TUNNELING SPECTROSCOPY OF ELECTRONIC STATES IN SEMICONDUCTORS AND TRANSITION METALS (HOSISIO), 24 MONTHS \$40,000

LOUISIANA TECH UNIVERSITY

STEPHENSON, PAUL B; TRIPLET-TRIPLET ABSORPTION MEASURE. MENTS IN ORGANIC CRYSTALS (HOSISES): 24 MONTHS \$40,000



#### TULANE UNIVERSITY

MORRISS, ROBERT H; RELATIVE INTENSITIES IN ELECTRON DIF-FRACTION (POISSO 001); 24 MONTHS \$30,100

#### MARKE

### UNIVERSITY OF MAINE, ORONO-

CLARK, ALTON H, AND TARR, CHARLES E: ELECTRICAL PROPERTIES OF AMORPHOUS SEMICONDUCTORS AND DYNAMIC PROPERTIES OF LIQUID CRYSTALS (HOJIPO), 12 MONTHS \$63,200

#### MARYLAND

### JOHNS HOPKINS UNIVERSITY

WALKER, J C; SOLID STATE STUDIES USING THE MOSSBAUER EF-FECT (HOSSES), 12 MONTHS \$55,500

### UNIVERSITY OF MARYLAND, COLLEGE PARK

BHAGAT, 8 M, AND ANDERSON, J R; CARRIER SCATTERING AND FERMIOLOGY IN FERROMAGNETIC CONDUCTORS (HOJJJA); 12 MONTHS \$24,100

BHAGAT, S M; THE LAMBDA TRANSITION IN LIQUID HELIUM (HOSILIS): 24 MONTHS \$40,000

PRANCE, RICHARD E, AND FALK, DAVID S; REAL METALS IN IN-TERACTION WITH ELECTROMAGNETIC PROBES (HOSA708): 6 MONTHS \$3,900

### MASSACHUSETTS

#### BRANDEIS UNIVERSITY

BERKO, STEPHAN; POSITRON, ELECTRON AND PHOTON EXPERI-MENTS (PO14117 001); 24 MONTHS \$43,000

### HARVARD UNIVERSITY

POUND, ROBERT V; RESONANCE AND RADIATION PHYSICS (HOS1171); 6 MONTHS \$25,000

POUND, ROBERT V; RESONANCE AND RADIATION PHYSICS (HOS1711 001): 24 MONTRS \$109,500

ENTENDEICH, HENRY, AND MARTIN, PAUL C: THEORETICAL PROBLEMS IN SOLID STATE AND STATISTICAL PHYSICS (HOSSITS); 6 MONTHS \$33,900

TINKHAM, MICHAEL; SUPERCONDUCTIVITY AND FAR INFRARED STUDIES OF SOLIDS (HOSSISS X00); 12 MONTHS \$51,500

TURNBULL, DAVID, MEYER, ROBERT B, PERSHAN, PETER S, AND DOLPHIN, DAVID H; PHYSICAL AND CHEMICAL PROPERTIES OF ORDERED FLUIDS (LIQUID CRYSTALS) (H034401); 12 MONTHS \$100,000

### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

GREYTAK, T J; RAMAN SCATTERING FROM LIQUID HELIUM (HOJ1993); 24 MONTHS \$96,600

STANLEY, H BUGENE; RESEARCH IN STATISTICAL MECHANICS (HAJSTIS): 24 MONTHS \$12,500

SHULL, C G; MAGNETIC ORDERING AND NEUTRON PHYSICS STU-DIES (Hossess): 12 Months \$119,000

### NORTHEASTERN UNIVERSITY

SHIFFMAN, CARL A, AND NEIGHBOR, JAMES E; NEW APPLICATIONS OF THE RADIO FREQUENCY SIZE EFFECT (HOSSIS); 24 MONTHS \$44,000 DWORIN, LOWELL; STRONG CORRELATIONS IN METALS (POSSIS); 24 MONTHS \$27,900

### TUPTS UNIVERSITY

MCCARTHY, KATHRYN A; SOLID STATE SYSTEMS AND THEIR APPLICATIONS (HOSSISS); 12 MONTHS \$31,400

### UNIVERSITY OF MASSACHUSETTS, AMHERST

GOLDENBERG, H MARK; MEASUREMENT OF GRAVITATIONALLY IN-DUCED ELECTRIC FIELDS ABOUT CONDUCTORS (HOSIGOT); 15 MONTHS \$18,400

ENGELSBERG, STANLEY; EQUILIBRIUM AND TRANSPORT PROPER-TIES IN MANY BODY SYSTEMS (HOJ4504); 24 MONTHS \$79,800

PENCHINA, CLAUDE M; OPTICAL PROPERTIES OF SEMICONDUCTORS AND INSULATORS IN ELECTRIC FIELDS (HOSISOR): 24 MONTHS 858300

HALLOCK, ROBERT B; QUANTIZED VORTEX RINGS, THE A.C. JOSEPHSON EFFECT AND OTHER ORIFICE FLOW PHENOMENA IN HEII (HOSISSI); 24 MONTHS \$33,300

FORD, NORMAN C JR, LANGLEY, KENNETH R, AND HALLOCK, ROBERT B; QUASIELASTIC LIGHT SCATTERING FROM QUANTUM CRYSTALS (HOJLIT): 21 MONTHS \$55.500

### UNIVERSITY OF MASSACHUSETTS, BOSTON

RAO. D V Q L N; NONLINEAR OPTICAL PROPERTIES OF LIQUID CRYSTALS (HOSSIS): 12 MONTHS \$12,000

### MICHIGAN

### MICHIGAN STATE UNIVERSITY

BLATT, F J, AND SCHROEDER, P A; ELECTRONIC PROPERTIES OF METALS AND ALLOYS (HOSSES X00): 12 MONTHS \$90,000

BASS, JACK; ELECTRON TRANSPORT AND POINT DEFECTS IN METALS (HOJ4121); 12 MONTHS \$36,000 SPENCE, R D, AND FORSTAT, HAROLD, THE EFFECTS OF IMPURI-TIES ON THE MAGNETIC PROPERTIES OF CRYSTALS (HOSLISS); 24 MONTHS \$40,000

HARRISON. M. J. HARTMANN, W. M. WOODRUFF, T. O., AND KAPLAN, T. A.; THEORETICAL STUDIES IN SOLID STATE PAYSICS (HOSISES); 24 MONTHS 809,800

### UNIVERSITY OF MICHIGAN

SANDERS, T M JR; LOW-TEMPERATURE FHYSICS-MOSTLY LIQUID HELIUM (HOSSISS XOO); 12 MONTHS \$54,000

#### WAYNE STATE UNIVERSITY

GUSTAFSON, DANIEL R; THE ANGULAR CORRELATION OF POSITRON ANNIHILATION RADIATION (HOLISIG); 12 MONTHS \$21,800

DEGRAAF, ADRIAAN M; THE G SHIFT OF CONDUCTION ELECTRONS IN METALS AND ALLOYS (POITMA); 24 MONTHS \$25,000

### MINNESOTA

### UNIVERSITY OF MINNESOTA

HALLEY, J WOODS: THEORY OF SOLIDS AND LIQUIDS AT LOW TEM-PERATURE (HOSEPO): 24 MONTHS \$27,100

#### MISSISSIPPI

### UNIVERSITY OF MISSISSIPPI

PETERS, RANDALL D; PHONON SELF-INTERACTIONS IN FER-ROELECTRICS (POSISSE); 12 MONTHS \$15,800

#### MISSOURI

### UNIVERSITY OF MISSOURI, COLUMBIA

MUHLESTRIN, LEWIS D, GINGRICH, NEWELL, TOMPSON, CLIFFORD, AND DANNER, HORACE; BLASTIC AND INELASTIC NEUTRON DIFFRACTION STUDIES (HOSSIS); 6 MONTHS \$7,000

### WASHINGTON UNIVERSITY

FEENBERG, EUGENE, AND CLARK, JOHN W: THE MICROSCOPIC THEORY OF QUANTUM FLUIDS AND EXTENDED NUCLEAR SYSTEMS (HOJISM\*), 12 MONTHS \$20,060

BOLEF, DAN 1; ULTRASONIC STUDIES IN SOLIDS (HOSIGGE); 12 MONTHS \$10,000

NORDERG, R E, AND LUSZCZYNSKI, K; PULSED MAGNETIC RESONANCE AND OTHER STUDIES AT LOW TEMPERATURES (HOSIGES); 12 MONTHS \$9,700

BOLEY, DAN 1; ACOUSTIC MAGNETIC RESONANCE (PO18718 001); 24 MONTHS \$88,600

### MONTANA

### MONTANA STATE UNIVERSITY

SWENSON, ROBERT J; SUMMER WORKSHOP IN SELECTED TOPICS IN THEORETICAL PHYSICS (HOJ4850): 12 MONTHS \$3,400

### NEW JERSEY

### PRINCETON UNIVERSITY

CARVER, THOMAS R; MAGNETIC AND OPTICAL PROPERTIES OF SOLIDS AND GASES (HOSIGIS); 24 MONTHS \$150,000

### RUTGERS UNIVERSITY

LUTHI, BRUNO; MAGNETIC MATERIALS USING ULTRASONIC TECHNIQUES (POISIOT 001); 24 MONTHS \$66,900

### STEVENS INSTITUTE OF TECHNOLOGY

DAUNT, JOHN G; BASIC AND PRACTICAL PROBLEMS IN LOW TEM-PERATURE SCIENCE (Hoistole): 12 MONTHS \$103,000

ROTHBERG, GERALD M; THE MOSSBAUER EFFECT IN STUDIES OF ELECTRONIC AND VIBRATIONAL STRUCTURE (HOSSIES): 12 MONTHS 814-500

MEISSNER, HANS; SUPERCONDUCTIVITY (HOJS174); 24 MONTHS \$54,000

### NEW MEXICO

### NEW MEXICO STATE UNIVERSITY

LIEFELD, ROBERT J: DENSITY OF CONDUCTION BAND STATES IN METALS FROM SOFT X-RAY CONTINUUM ISOCHROMATS (HOSISIS); 24 MONTHS 144,900

### **NEW YORK**

### CITY COLLEGE

SARACHIK, MYRIAN P., AND SMITH, FREDERICK W; MAGNETIC IM-PURITY EFFECTS IN METALS (HOS4678); 12 MONTHS \$40,100

### COLUMBIA UNIVERSITY

NOWICK, ARTHUR S; DEFECTS AND DEFECT MOBILITY IN IONIC CRYSTALS (HOS 48); 12 MONTHS \$46,600

HARTMANN, SVEN R; RESONANCE PHYSICS (HOSLIOT); 12 MONTHS

### CORNELL UNIVERSITY

RHODIN, THOR N; ELECTRON AND ATOM INTERACTIONS AT CRYSTAL SURFACES (HOSIFOF); 24 MONTHS \$61,100



NOLCOMB, D F: THE INSU'ATOR-METAL TRANSITION IN DISOR-DERED SYSTEMS (HOSSIES); 19 MONTHS \$60,000

BLAKELY, J M: STUDIES IN OAS ADSORPTION AND SOLUTE SEGREGATION AT SOLID SURFACES (HOSSESS XOO); 12 MONTHS \$48,000

SILCOX, JOHN; FLUX LINE STRUCTURES IN SUPERCONDUCTORS (HOMISS); 12 MONTHS \$24,600

RICHARDSON, R C; QUANTUM CRYSTALS CONFERENCE (POSOS75); 12 MONTHS 85,000

NELKIN, MARK; DYNAMICAL THEORY OF DISORDERED SYSTEMS (POSISES); 24 MONTHS \$36,900

#### FORDHAM UNIVERSITY

SKALSKI, STANIBLAUB; NUCLEAR MAGNETIC RESONANCE IN FER. ROMAGNETIC METALS AND ALLOYS (POSSESS 002): \$2,900

## INSTITUTE OF ELECTRICAL & ELECTRONIC ENGRS INC

VAN REUTH, E C: 1978 APPLIED SUPERCONDUCTIVITY CON-FERENCE (HOSSISS), 12 MONTHS \$4,000

### NEW YORK UNIVERSITY

Birman, Joseph L; Theoretical solid State Physics (Hosi744); 24 Months \$22,000

BIRMAN, JOSEPH 1; THEORETICAL SOLID STATE PHYSICS (HOJ1742 001); \$4,900

BRANDT, WERNER; SOLIDS BY POSITRON ANNIHILATION (HOJISIO); 24 MONTHS \$104,000

LEVY, PETER M; MAGNETO-ELASTIC AND THERMODYNAMIC BEHAVIOR OF THE RARE-EARTH PNICTIDES (HOSELES); 12 MONTHS \$13,400

LEVY, PETER M; MAGNETO-ELASTIC AND THERMODYNAMIC BEHAVIOR OF THE RARE-EARTH PNICTIDES (HOSELES 001); \$5,000

CUMMINS, HERMAN Z; LASER LIGHT SCATTERING STUDIES OF SOLIDS (HOSGESS): 12 MONTHS \$43,000

POPE, MARTIN; ELECTRONIC CONDUCTIVITY IN ORGANIC SOLIDS (PO14008 001): 24 MONTHS \$53,200

#### STATE UNIVERSITY AT ALBANY

DAS, TARA PRASAD; ELECTRONIC STRUCTURE AND ELECTRON-NUCLEAR HYPERFINE INTERACTIONS IN SOLID STATE (HOS1405); 24 MONTHS \$36,000

#### STATE UNIVERSITY AT BUFFALO

MROZOWSKI, S; SPECIFIC HEAT ANOMALY AT 0.6DEGREES IN IR-RADIATED GRAPHITE AND IN GLASSY CARBON (HGJ2229); 19 MONTHS 866.400

### STATE UNIVERSITY AT STONY BROOK

GRAF, ERLEND H; LOW TEMPERATURE STUDIES OF LIQUID HEJ-HE; MIXTURES AND SOLID HD (HOJ4575); 24 MONTHS \$50,500

## UNIVERSITY OF ROCHESTER

SHAW, EARL D; DEVELOPMENT OF THE SPIN-FLIP LASER AND RAMAN SCATTERING IN SOLIDS (HOSIGIA); 24 MONTHS \$69,700

### **NORTH CAROUNA**

### DUKE UNIVERSITY

MEYER, HORST; PROPERTIES OF FLUID HEL-HES MIXTURES AND OF SOLID HE AND DE (HOSEOGT); 24 MONTHS \$76,400

### WAKE FOREST UNIVERSITY

TURNER, THOMAS J. DEFORMED ALKALINE EARTH OXIDES UTILIZ-ING OPTICAL ABSORPTION, DIELECTRIC AND ANELASTIC RELAXA-TION (HOJS744), 24 MONTHS \$35,800

### NORTH DAKOTA

## UNIVERSITY OF NORTH DAKOTA

SOONPAA, HENN H; PHYSICAL PHENOMENA IN CRYSTALS CONSIST-ING OF A FINITE AND COUNTABLE NUMBER OF ATOMS IN ONE DIRECTION (HO31361); 12 MONTHS \$41,400

### OHIO

### CASE WESTERN RESERVE UNIVERSITY

GORDON, WILLIAM L; BAND STRUCTURE OF DILUTE ALLOYS (HOSSIOS X00); 12 MONTHS \$40,000

CHANDRASEKHAR, B S; ELECTRON TUNNELING INTO SOLIDS (HOS4409): 12 MONTHS \$45,800

SEGALL, BENJAMIN; ELECTRONIC STRUCTURE OF SOLIDS AND THE OPTICAL PROPERTIES OF SEMICONDUCTORS (HOJISES); 24 MONTHS \$30,000

## JOHN CARROLL UNIVERSITY

TRIVISONNO, JOSEPH JR; ELECTRON AND PHONON INTERACTIONS IN METALS (HOJISIS): 24 MONTHS \$46,800

### RENT STATE UNIVERSITY

BROWN, GLENN H; STRUCTURE AND PHYSICAL PROPERTIES OF LIQUID CRYSTALS (HOLIG. X00); 12 MONTHS \$125,100

### OHIO STATE UNIVERSITY

EDWARDS, DAVID O: LIQUID HES-HES MIXTURES AT LOW TEMPERA-TURES (HOSISSO); 12 MONTHS \$61,800

GAINES, JAMES R; A STUDY OF RELAXATION, DIFFUSION, AND POLARIZATION IN THE SOLID HYDROGENS (HOLDOLI XOO); 12 MONTHS \$37,200

YAQUB, M, AND GARLAND, J C; LOW TEMPERATURE TRANSPORT PHENOMENA IN METALS (HOSISSS); 12 MONTHS \$40,000

MILLS, R L, AND KORRINGA, JAN; WAVE PROPAGATION IN HETEROX ENEOUS MATERIALS (HOSSIAS); 12 MONTHS \$32,800

WIGEN, PHILIP E; MAGNETIC RESONANCE IN DILUTE ALLOYS AND IN THIN INSULATOR FILMS (HOLLISS); 12 MONTHS \$33,000

#### OREGON

### UNIVERSITY OF OREGON - EUGENE

LOWNDES, DOUGLAS H: STUDIES OF ELECTRONIC SCATTERING, BURNDING AND BAND STRUCTURE IN METALLIC ALLOYS AND COMPOUNDS (HOSSESS), 24 MONTHS \$11,200

HIGGINS, RICHARD J; ELECTRONIC STRUCTURE OF IMPERFECT METALLIC SYSTEMS (HOSS775): 24 MONTHS \$80,000

PARK, KWANGJAI, OPTICAL PROPERTIES OF SOLIDS (HOULESS); 24 MONTHS \$29,400

RAYFIELD, GEORGE W; LOW TEMPERATURE PHYSICS (POSS459 001); 4 MONTHS \$5,000

### PENNSYLVANIA

#### CARNEGIE-MELLON UNIVERSITY

FLINN, PAUL A: MOSSBAUER EFFECT STUDY OF DIFFUSION IN SOLIDS (HOSSISO), 12 MONTHS 440,000

SCHUMACHER, ROBERT T, AND VANDERVEN, NED S; MAGNETIC RESONANCE RESEARCH IN SOLIDS (HOSISOS): 24 MONTHS \$96,400

BERGER, LUC; CONDUCTION PROCESSES IN FERROMAGNETIC METALS AND ALLOYS (HOSLOD); 12 MONTHS \$1,900
DEBENDETTI. CERCLO.

DEBENEDETTI, SERGIO, AND OOSTERHUIS, WILLIAM T; SOLID STATE PROPERTIES WITH RADIOACTIVE TECHNIQUES (POISSES 001); 24 MONTHS \$74,200

### LEHIGH UNIVERSITY

FOWLER, W BEALL; THEORY OF ELECTRONIC STATES IN COMPLEX NON-METALLIC SOLIDS (HOSJ755); 24 MONTHS \$33,100

VAN SCIVER, WESLEY J; TRANSPORT OF ENERGY, CHARGE IMPURITIES, AND OTHER LOCALIZED DEFECTS IN INSULATING SOLIDS WITH EMPHASIS ON DETECTION BY OPTICAL MEANS (HOSISIS); 24 MONTHS \$40,000

## Pennsylvania State University

MUELLER, ERWIN W; RESEARCH WITH THE ATOM-PROBE FIELD ION MICROSCOPE (HOJ1678); 24 MONTHS \$74,800

ENISCH, H K; INVESTIGATION OF TRAP-LIKE LEVELS IN SEMI-IN-SULATING GLASSES (HØJISIT); 12 MONTHS 141,100

MCKELVEY, JOHN P; ELECTRICAL AND OPTICAL PROPERTIES OF SEMICONDUCTOR CRYSTALS (HOJIESS); 24 MONTHS \$40,000

## TEMPLE UNIVERSITY

MIHALISIN, TED W; EXPERIMENTAL STUDY OF TRANSPORT AND THERMODYNAMIC PROPERTIES NEAR MAGNETIC ORDERING TEMPERATURES (HOS4851); 24 MONTHS \$40,000

### UNIVERSITY OF PENNSYLVANIA

CALLEN, HERBERT B; STATISTICAL MECHANICS AND THEORY OF SOLIDS (HOULDS); 7 MONTHS \$17,500

### UNIVERSITY OF PITTSBURGH

TOWNSEND, JOHN R; RADIATION INDUCED DEFECTS IN METALS (HOJ1991); 24 MONTHS 284,000

LOWE, IRVING J; TRANSIENT NUCLEAR MAGNETIC RESONANCE STUDY OF SOLIDS (HOJ2861); 24 MONTHS \$108,200

GOLDBURG, WALTER 1; LIGHT SCATTERING FROM FLUIDS (POIS178 001); 24 MONTHS \$95,000

### FRANKLIN INSTITUTE-BARTOL RESEARCH FOUNDATION

CHEN, JAR-MO; RAMAN SCATTERING STUDY OF SURFACES (HOSINGE); 24 MONTHS \$15,000

## PUERTO RICO

## University of Pubrto Rico, Mayaguez

KAY, MORTIMER 1; NEUTRON DIFFRACTION PROGRAM (HG52904); 12 MONTHS \$82,100

### RHODE ISLAND

### BROWN UNIVERSITY

GLICKSMAN, MAURICE; THE GROWTH, ELECTRICAL AND OPTICAL PROPERTIES OF NEW SEMICONDUCTING ALLOYS (HOSSIGO); 12 MONTHS 844,400

BRAY, PHILIP J; NUCLEAR MAGNETIC RESONANCE STUDIES OF THE STRUCTURE OF GLASSES (HOSSISS); 12 MONTHS \$32,900

BEYER, ROBERT T; ULTRASONIC PROPAGATION STUDIES (HOS4408); 12 MONTHS \$51,300



TAUD, JAN; INVESTIGATION OF THE OPTICAL PROPERTIES OF CRYSTALLINE AND AMORPHOUS SOLIDS AT HIGH TEMPERATURES AND AT PHASE TRANSITIONS (MODULE); 24 MONTHS \$44,000

WEINER, J H; THEORY OF RATE PROCESSES IN SOLIDS (HOSISTE); 24

MONTHS \$38,000

COOPER, LEON N, AND HOUGHTON, ANTHONY; SUPERCONDUCTIVI-TY AND THE MANY BODY PROBLEM (POSSIF SOIL): 24 MONTHS \$55,200 QUINN, JOHN J. THEORETICAL STUDY OF ELECTRON-ELECTRON IN-TERACTIONS AMONG THE CONDUCTION ELECTRONS IN SOLIDS (POISSO SOIL): 24 MONTHS \$39,500

#### TENNISSEE

University of Tennessee, Knoxville

CALLCOTT, T A: ANGULAR EFFECTS IN PHOTOEMISSION (HOSITEI);

### TEXAS

RICE UNIVERSITY

RORSCHACH, H E; LOW TEMPERATURE AND SOLID STATE PHYSICS (HOJIGE); 18 MONTHS \$30,100

TRAMMELL, GEORGE T; THEORETICAL MOSSBAUER EFFECT STU-DIES (HOLPER): 24 MONTHS \$76,800

#### UTAH

UNIVERSITY OF UTAH

SEWARD, WILLIAM D. EFFECTS OF DENSITY AND PHASE CHANGES ON THE THERMAL CONDUCTIVITY OF SOLID HELIUM-1 (HOSIGE); 12 MONTHS \$22.00

AILION, DAVID C; MAGNETIC RESONANCE STUDY OF ATOMIC AND MOLECULAR MOTIONS (HOS1471); 24 MONTHS \$80,900

LUTY, PRITZ; TUNNELING PROCESSES IN CRYSTAL DEFECTS (HOSSING X00); 12 MONTHS \$49,900

SYMKO, OREST G: PROPERTIES OF DILUTE ALLOYS AT VERY LOW TEMPERATURES CRITICAL PHENOMENA AND NUCLEAR COOLING (HOUSE); 24 MONTHS \$52,500

WILLIAMS, G A; LOW FREQUENCY ENERGY LOSS IN SUPERCONDUCTORS (HO) LIMB; 24 MONTHS \$38,100

### VIRGINIA

UNIVERSITY OF VIRGINIA

HESS, GEORGE S; SUPERFLUID PHENOMENA IN LIQUID HELIUM (HOSTIS): 74 MONTHS \$40,000

RUVALDS, JOHN; PHONON INTERACTIONS AND PHASE TRANSI-TIONS (HOUSELY: RI MONTHS \$29,700

CELLI, VITTORIO; SURFACE STUDIES IN SOLIDS (HOSIDO); 24

DEAVER, BASCOM S JR; MACROSCOPIC QUANTUM PHENOMENA (P01470; 001); 12 MONTHS \$33,700

### WASHINGTON

UNIVERSITY OF WASHINGTON

DASH, J G: MONOLAYER PHYSICS (HOISIST); 12 MONTHS \$103,800

WASHINGTON STATE UNIVERSITY

DUVALL, GEORGE E; DISLOCATIONS IN LIF UNDER SHOCK COM-PRESSION (HOSIESO), 12 MONTHS \$60,000

BATTELLE MEMORIAL INSTITUTE-BATTELLE NORTHWEST

HARLING, OTTO K; HIGH MOMENTUM TRANSFER NEUTRON SCAT-TERING PROM LIQUID ARGON -- A MODEL-EXPERIMENT COMPARISON (Houses); 12 Months \$10,000

### WISCONSIN

UNIVERSITY OF WISCONSIN, MADISON

LIN, CHUN C; BAND STRUCTURE OF SOLIDS AND OF POINT DE-FECTS IN CRYSTALS BY THE METHOD OF TIGHT BINDING (LCAO) (HOLLIE KOO), 12 MONTHS \$24,400

HUBER, DAVID L; THEORETICAL STUDIES OF THE MAGNETIC PRO-PERTIES OF SOLIDS (HOLLIN); 24 MONTHS \$22,200

MORAN, P R. RARE CONCENTRATION DEFECT AND DAMAGE STATE PHENOMENA IN SOLIDS (HOJ4565); 12 MONTHS 128,000

BRUCH, LUDWIG W; THERMODYNAMICS OF HELIUM (PO14704 061); 24 MONTHS 228600

YEN, WILLIAM M; SPECTROSCOPIC STUDIES OF MAGNETICALLY OR-DERED MATERIALS AND LOW TEMPERATURE ELECTRONIC PROPER-TIES (POISSES COS): 24 MONTHS \$81,500

## SOLID STATE CHEMISTRY

### CALIFORNIA

CALIFORNIA INSTITUTE OF TECHNOLOGY

DAVIDSON, NORMAN, AND SAMSON, STEN; BASIC RESEARCH ON THE STRUCTURE OF COMPLEX INTERMETALLIC COMPOUNDS (HOMISS); 12 MONTHS \$24,200

UNIVERSITY OF CALIFORNIA, LOS ANGELES

NICOL, MALCOLM T; STRUCTURES AND BONDING OF SOLIDS AT EX-TREMELY HIGH PRESSURES (HOLDOTS); M MONTHS MILEO NICOL, MALCOLM F; STRUCTURES AND BONDING OF SOLIDS AT EX-

TREMELY HIGH PRESSURES (HOSSOTS 301): \$8,000

#### CON VICTICUT

YALE UNIVERSITY

MCERIDE, J MICHAEL: THE CRYSTAL CHEMISTRY OF RADICAL PAIRS (HOSPIS): 24 MONTHS \$68,200

### PLORIDA

FLORIDA STATE UNIVERSITY

MANDELKERN, LEO; THE NATURE OF THE CRYSTALLINE STATE IN POLYMERS (HOJ3794); 24 MONTHS \$45,200

UNIVERSITY OF PLORIDA

BUTLER, GEORGE B; THERMALLY STABLE PLEXIBLE POLYMERS (HOSERS); \$4 MONTHS \$51,000

ESCH, T E HOGEN; ION PAIRS AND THE STEREOCHEMISTRY OF ANIONIC POLYMERIZATION (HOUSIS); 24 MONTHS \$45,400

#### **ILLINOIS**

ILLINOIS INSTITUTE OF TECHNOLOGY

WAHLBECK, P 0; INTERACTIONS OF GASES WITH SURFACES POSOTOG); 24 MONTHS \$45,000

NORTHWESTERN UNIVERSITY

LESTER, JOSEPH E; KINETICS OF VAPORIEATION OF IONIC SOLIDS (POSSIO 001); 24 MONTHS \$35,100

UNIVERSITY OF CHICAGO

STOUT, J W: ELECTRONIC ENERGY LEVELS IN PARAMAGNETIC CRYSTALS (POIOTS 601): 24 MONTHS \$185,500

### INDIANA

PURDUE UNIVERSITY

HONIG, J M; ELECTRICAL PROPERTIES OF SINGLE CRYSTAL NIO AND NBO (HOSLULU), 24 MONTHS \$71,000

KEESOM, P. H. AND HONIG, J. M. PROPERTIES OF DOPED TION (HOS(131): 24 MONTHS \$72,500

ANGELL, C.A.; ELUCIDATION OF THERMODYNAMIC, RELAXATIONAL AND STRUCTURAL ASPECTS OF THE GLASS TRANSITION PHENOMENON (POIOTER); 24 MONTHS \$70,600

### MASSACHUSETTS

UNIVERSITY OF MASSACHUSETTS, AMHERST

MACKNIGHT, WILLIAM 3; MICROPHASE SEPARATION IN SOLID OR. GANIC POLYMERS CONTAINING SALT GROUPS (Hospits X00); 12 MONTHS \$31,200

STEIN, RICHARD S; OPTICAL AND X-RAY STUDIES OF POLYMER RELAXATION (HOUSIS X00): 12 MONTHS \$40,100

PRICE, FRASER P; CRYSTALLIZATION OF POLYMERS UNDER EXTREME CONDITIONS (HOSILIS XOO), 12 MONTHS \$21,000

### MICHIGAN

UNIVERSITY OF MICHIGAN

KOPELMAN, RAOUL; EXCITIONS AND PHONONS IN CRYSTALLINE AND AMORPHOUS MOLECULAR SEMICONDUCTORS (HOISES X00); 12 MONTHS 420,200

YEH, O S Y, AND FILISKO, FRANK E; THERMODYNAMIC STUDIES OF ORDER IN AMORPHOUS POLYMERS (HOJJ125): 24 MONTHS \$48,500

### MINNESOTA

University of Minnesota

Conroy, Lawrence e, intercalation complexes of layered Dichalcogenides (Hollis): 24 Months \$40,000

### NEW HAMPSHIRE

DARTMOUTH COLLEGE

HGRNIG, JAMES F, AND BRAUN, CHARLES L; ENERGY TRANSFER IN MOLECULAR SOLIDS (HOISTET XOO), 12 MONTHS \$40,900

STOCKMAYER, WALTER H; PHYSICAL CHEMISTRY OF HIGH POLYMERS (POSOLIS X00): 12 MONTHS \$54,000

UNIVERSITY OF NEW HAMPSHIRE, DURHAM

OWENS, CHARLES W; CHEMISTRY OF SOLIDS (HOSSION X00); 12 MONTHS \$26,400

## NEW JERSEY

PRINCETON UNIVERSITY

TOBOLSKY, ARTHUR Y; POLYMER VISCOELASTICITY AND MOLECU-LAR WEIGHT DISTRIBUTION (HOSTIGN): 24 MONTHS 456,900



## NEW YORK

## ADRIPHE UNIVERSITY

RUDMAN, BEUBEN; CRYSTAL STRUCTURES OF PLASTIC CRYSTALS (Harwy): 12 Nonths (20,000

## PULYTECHNIC INSTITUTE OF BROOKLYN

MORAWETZ, HERBERT; KINETIC STUDY OF ISOMERIZATION IN BACKBONE OF POLYMER CHAINS IN THE RUBBERY AND GLASSY STATE (HOSTITI), MANONTHS MASON

#### RENSSELAER POLYTECHNIC INSTITUTE

KRAUSE, SONJA; POLYMER COMPATIBILITY (HOMESS); 24 MONTHS \$41,000

WUNDERLICH, BERNHARD, SIMULTANEOUS POLYMERIZATION AND CRYSTALLIZATION (HOSSES), 24 MONTHS \$70,000

#### STATE UNIVERSITY AT BUPPALO

EHRLICH, PAUL; STRUCTURE AND PARAMAGNETISM OF CONJU-GATED MACRORADICALS. CRYSTALLIZABLE POLYPHEN-YLACETYLENE (HOLLIS), 24 MONTHS \$39,800

#### NORTH CAROUNA

#### DUKE UNIVERSITY

KRIGBAUM, WILLIAM R: X-RAY DIFFRACTION STUDIES OF POLYMERS (HOSTILLY 24 MONTHS 257.700

#### OHIO

## KOENIO, J L; OTHER PROGRAM AWARDS (OJAWDS), 12 MONTHS \$32,000 CASE WESTERN RESERVE UNIVERSITY

LANDO, J 8; THE CRYSTAL STRUCTURES OF FLUCRINE CONTAINING POLYOLEFINS (HOISTPI); 24 MONTHS \$37,400

BLACKWELL, J; FINE STRUCTURE OF CELLULOSE (HOSIGET); 24 MONTHS \$59,800

## UNIVERSITY OF AKRON

MORTON, MAURICE, MCINTYER, DONALD, MEINECKE, EBERHARD A, AND FETTERS, LEWIS J; SYNTHESIS, STRUCTURE, THERMODYNAMIC PROPERTIES AND MECHANICAL BEHAVIOR OF BLOCK COPOLYMERS (HUSSSIX X00); 12 MONTHS 141,700

#### ORIGON

## LINFIELD COLLEGE

BELL, ANTHONY E, AND SWANSON, L W; FIELD EMISSION ENERGY DISTRIBUTION STUDY OF CLEAN AND ADSORBATE COVERED METALS (HOSLOS): 12 MONTHS \$21,900

## OREGON STATE UNIVERSITY

WICKMAN, H HOLLIS; MOSSBAUER INVESTIGATIONS OF METAL ION PROPERTIES IN NON-CRYSTALLINE SOLIDS (HOSSIES); 24 MONTHS \$45,000

SCOTT, ALLEN B; DONOR CENTERS IN VANADIUM PENTOXIDE (HOSSINS); 12 MONTHS \$8,000

## PENNSYLVANIA

## CARNEGIE-MELLON UNIVERSITY

CASASSA, EDWARD F, AND BERRY, G C; PROPERTIES OF POLYPHEN-YLENES IN SOLUTION (HO28518 X01): 12 MONTHS C27,500

BERRY, GUY C, AND FOX, THOMAS G; RHEOLOGICAL STUDIES ON CONCENTRATED SOLUTIONS OF POLYMERS (HOSTIN X00); 12 MONTHS \$33,200

## LEHIGH UNIVERSITY

FOWKES, FREDERICK M; DEFECT CHEMISTRY OF SILICA SURFACES (HOS1731); 24 MONTHS \$48,000

LEIDHEISER, HENRY JR; CHARACTERIZATION OF HIGH-AREA AND LOW-AREA NICKEL AND NICKEL OXIDE (HC34171 X00°); 12 MONTHS \$46,600

## PENNSYLVANIA STATE UNIVERSITY

MCKINSTRY, HERBERT A, AND STUBICAN, VLADIMIR S; STRAIN AND REACTIONS IN NORMER ALLIC SOLIDS (RIGIRIS); 24 MONTHS \$3,000

SPEAR, KARL E; SYNTHESIS, PROPERTIES, AND DEFECT CHEMISTRY OF RARE-EARTH BORIDES (HOS4115); 24 MONTHS \$40,000

## TEXAS

## BAYLOR UNIVERSITY

MILLIGAN, W O; LANTHANIDE AND ACTINIDE HYDROUS OXIDES AND HYDROXIDES (HOSISIS); 12 MONTHS \$20,000

## UTAH

## BRIGHAM YOUNG UNIVERSITY

HALL, H TRACY: INORGANIC SYNTHESIS BY HIGH PRESSURE AT HIGH TEMPERATURE (HOSSISS), 12 MONTHS \$30,000

#### WASHINGTON

## UNIVERSITY OF WASHINGTON

SLUTSKY, LEON J; VAN DER WAALS INTERACTIONS IN METALS (HOSSTOT); 24 MONTHS \$65,000

#### WISCONSIN

## UNIVERSITY OF WISCONSIN, MADISON

SCHRAG, JOHN L. AND FERRY, JOHN D. MOTIONS AND CONFORMA-TIONAL PROPERTIES OF MACROMOLECULES (HOSSIGO XOO); 12 MONTHS \$10,000

SCHRAG, JOHN L, AND FERRY, JCHN D; MOTIONS AND CONFORMA-TIONAL PROPERTIES OF MACROMOLECULES (HOSSIAG XG): \$2,000

## ENGINEERING MATERIALS

#### CALIFORNIA

## CALIFORNIA INSTITUTE OF TECHNOLOGY

VAUGHAN, ROBERT W; INVESTIGATION OF BULK AND SURFACE PROPERTIES OF MATERIALS WITH NUCLEAR MAGNETIC RESONANCE AND HIGH PRESSURE TECHNIQUES (HOSSIT): 24 MONTHS \$70,000

HUMPHREY, FLOYD B; INVESTIGATIONS OF MAGNETIC FLUX REVERSAL USING A KERRMAGNETO-OPTIC CAMERA (HOSSESS); 24 MONTHS \$68,900

TSCHOEGL, N W; PHYSICAL AND PHYSICOCHEMICAL BEHAVIOR OF FILLED AND UNFILLED ELASTOMERS (HOSIST); 12 MONTHS \$145,600

#### STANFORD RESEARCH INSTITUTE

SHOCKEY, D A; ON THE USE OF PLASTICITY ENHANCING LIQUIDS IN FRACTURE CONTROL OF CERAMICS (HOSLIS); 12 MONTHS \$18,900

## STANFORD UNIVERSITY

GIBBONS, JAMES F; ION IMPLANTATIONS IN SEMICONDUCTORS (HOS1888), 24 MONTHS \$77,000

PARLEE, NORMAN A D; DIFFUSION OF GASES IN LIQUID METALS (HOSSOS); 24 MONTHS \$59,900

NIX, WILLIAM D. AND SHERBY, OLEG D. A CRITICAL APPRAISAL OF THE CONTRIBUTION OF GRAIN BOUNDARY SLIDING TO HIGH TEM-PERATURE CREEP OF POLYCRYSTALLINE SOLIDS (HOSIJISH); 12 MONTHS 445000

POUND, GUY M; NORMAL MODE AND MOLECULAR DYNAMICS COM-PUTER CALCULATIONS OF THE FREE ENERGIES OF NUCLEI (HOSI418); 12 MONTHS \$45,000

PEARSON, GERALD L; FUNDAMENTAL STUDIES OF ALGAAS-GAAS HETEROJUNCTIONS FOR SOLAR ENEKGY CONVERTERS (HOSISIP); 12 MONTHS \$45,000

SPICER, WILLIAM E; SURFACE REACTIONS AND ELECTRONIC STRUCTURE OF NOBLE AND TRANSITION METALS AND ALLOYS (HOSIST); 24 MONTHS \$80,000

BARRETT, CRAIG R; STUDY OF THE STRUCTURE AND PROPERTIES OF DISPERSION HARDENED MATERIALS (KOMOTT); 12 MONTHS \$41,800

## University of California, los angeles

ARDELL, ALAN J; PRECIPITATION HARDENING OF ORDERED ALLOYS (HONING); 24 MONTHS \$52,000

SINES, GEORGE; STUDY OF THE EFFECT OF ANISOTROPY ON DE-FECT INTERACTIONS (HOJESSI), 12 MONTHS \$25,400

DE FONTAINE, DIDIER; CLUSTERING AND ORDERING INSTABILI-TIES IN MULTICOMPONENT SYSTEMS (HOSISTY); 24 MONTHS \$58,100

TETELMAN, ALAN S, THE RESISTANCE OF FIBROUS COMPOSITES TO THE NUCLEATION AND GROWTH OF MICROCRACKS (HOSLUI); 12 MONTHS \$35,000

STERN, RICHARD; INVESTIGATION OF ULTRASONIC PROPAGATION IN MAGNETIC MATERIALS (HOULDS); 12 MONTHS \$24,700

## COLORADO

## COLORADO SCHOOL OF MINES

BALL, BRIAN; RESEARCH INITIATION - CONCENTRATION OF ULTRA-FINE PARTICLES BY OIL PHASE (HOSSES); 18 MONTHS \$16,000

## CONNECTICUT

## UNIVERSITY OF CONNECTICUT

AZABOFF, LEONID V; ELECTRONIC STRUCTURE OF SUPERALLOYS (HOSLIGH): 12 MONTHS \$60,000

GREENE, NORBERT D. ONKELINX, CLAUDE, RITLAND, GERALD D. RICHELLE, LEON J. AND WARD, PETER A: BIOMATERIALS-IMPROVED IMPLANT ALLOYS (HOSILIA); 12 MONTHS \$90,000

## YALE UNIVERSITY

BARKER, RICHARD C, AND YELON, ARTHUR; FERROMAGNETIC RESONANCE RELAXATION IN METAL PLATELETS (HOSSOOS); 24 MONTHS \$81,600



#### DELAWARE

#### TINIVERSITY OF DELAWARE

SCHULTZ, JEROLD M, AND SANDLER, STANLEY I; THE STRUCTURE AND PROPERTIES OF LIQUIDS AND MOLTEN POLYMERS (HOSESSE); 24 MONTHS \$116,000

KRAMER. JOHN J; ENERGY LOSSES DURING CYCLIC MAGNETIZA. TION IN CRYSTALS OF A FERROMAGNETIC CONDUCTOR (KOIOSER COI): \$4 MONTHS \$58,400

#### DISTRICT OF COLUMNIA

#### NATIONAL ACADEMY OF ENGINEERING

PROMISEL, N E: CONTINUATION OF ADVISORY SERVICES TO THE FEDERAL GOVERNMENT ON MATERIALS RESEARCH AND DEVELOP. MENT (CA70000); 12 MONTHS \$5,000

#### RORIDA

## UNIVERSITY OF FLORIDA

HENCH, L L; VIABLE FIXATION OF ARTIFICIAL LIMBS (HOSSOOS); 24 MONTHS \$143,100

HARTLEY, CRAIG S. SIMULATION OF DEFECTS IN CRYSTALS BY POINT FORCE ARRAYS (HOSI480); 8 MONTHS \$4,400

#### UNIVERSITY OF FLORIDA-ENGINEERING & INDUSTRIAL EXPERIMENT STATION

GOULD, ROBERT W; THE EFFECT OF THERMO-MECHANICAL PROCESSING ON THE ZONE STATE OF SELECTED AL-ZN-MG ALLOYS (HOJ1817); 24 MONTHS \$50,000

GOULD, ROBERT W; THE EFFECT OF THERMO-MECHANICAL PROCESSING ON THE ZONE STATE OF SELECTED AL-ZA-MG ALLOYS (HOS1817 001); 6 MONTHS \$5,800

RHINES, F N; CONTROL OF ENVIRONMENTAL SURFACE REACTIONS (HOJ4550); 12 MONTHS \$176,900

#### GEORGIA

## GRORGIA INSTITUTE OF TECHNOLOGY

COCHRAN, J X JR; RESEARCH INITIATION - PREFERIENTAL METAL DEPOSITION ON TUNGSTEN IN TUNGSTEN ZIRCONIA COMPOSITES (HOSEEW), 18 MONTHS \$16,000

#### KLINOIS

## ILLINOIS INSTITUTE OF TECHNOLOGY

LARSEN, RUSSELL D: STATISTICAL MECHANICS OF MATERIALS FAILURE PHENOMENA- STABILITY OF IMPERFECT SOLIDS (HOSLISS); 12 MONTHS \$25,000

GORDON, PAUL: ENVIRONMENTAL SENSITIVITY OF STRUCTURAL METALS-LIQUID METAL EMBRITTLEMENT (HOS;664); 12 MONTHS \$70,000

JOHNSON, D LYNN; IMPURITY EFFECTS IN THE SINTERING OF CERAMICS (MOJOS94); 24 MONTHS \$58,400

## UNIVERSITY OF ILLINOIS AT CHICAGO CIRCLE

WEINS, MICHAEL J; RESEARCH INITIATION - COMPUTER MODELING OF HIGH ANGLE GRAIN BOUNDARIES (HOJESSO); 18 MONTHS \$16,000

## UNIVERSITY OF ILLINOIS AT URBANA

EHRLICH. GERT: ATOMIC EXPLORATION OF CRYSTAL SURFACES (HOJ1898), 24 MONTHS \$68,300

GREENE, JOSEPH E; RESEARCH INITIATION . THE DEVELOPMENT OF A NEW CHEMICAL ANALYSIS TECHNIQUE FOR THIN FILM BLFC. TRONIC DEVICES (H0J2651); 18 MONTHS \$16,000

HOLONYAR, NICK JR; LUMINESCENCE AND LASER STUDIES ON III.V SEMICONDUCTORS (HOSSITI); 24 MONTHS \$71,200

## INDIANA

## UNIVERSITY OF NOTRE DAME

ALLEN, CHARLES W: STRUCTURAL DEFECTS AND TRANSFORMA-TIONS IN INTERMEDIATE LAVES-PHASES (HOSSIGE): 12 MONTHS \$34,500 FIORE, NICHOLAS F; ULTRASONIC DAMPING STUDIES IN CON-TROLLED MICROSTRUCTURES (HOSIAIN); 12 MONTHS \$25,800

## KENTUCKY

## UNIVERSITY OF KENTUCKY

DEANGELIS, R J. AND SARGENT, GORDON A: THERMOHECHANICAL STRENGTHENING OF HIGH STRENGTH BETA TITANIUM ALLOYS (HOT4999); 12 MONTHS \$40,000

CONRAD, HANS; A STUDY OF THE RELATIONSHIP BETWEEN THE DEFORMATION UNDER MULTIAXIAL STRESS STATES AND THE DISLO-CATION STRUCTURE (HOSISES); 12 MONTHS \$40,000

## MARYIAND

## UNIVERSITY OF MARYLAND, COLLEGE PARK

MARCINKOWSKI, M J. GRAIN BOUNDARY BEHAVIOR DURING PLASTIC DEFORMATION (HOSERER); 24 MONTHS \$65,000

## MASSACHUSETTS

## MASSACHUSETTS INSTITUTE OF TECHNOLOGY

GATOS, HARRY C, AND WITT, AUGUST F: STUDY OF MICROSCOPIC GROWTH RATES AND THEIR ROLE IN SOLIDIFICATION (HOSSIN XOI); 12 MONTHS 438,600

COHEN, MORRIS; NUCLEATION IN SOLID-STATE TRANSFORMATIONS (HO31189); 12 MONTHS \$35,400

#### NORTHEASTERN UNIVERSITY

NOWAK, WELVILLE B; HIGH-FIELD, HIGH-CURRENT, HIGH-TEM-PERATURE SUPERCONDUCTORS (HOSS768); 12 MONTHS \$35,000

## MICHIGAN TECHNOLOGICAL UNIVERSITY

RUNDMAN, KARL B; COMPOSITION IN MODIFIED ALEN ALLOYS (Kososen; 24 Months \$64,400

#### UNIVERSITY OF MICHIGAN

SHERMAN, PAULINE; PARTICLE GENERATION BY CONDENSATION (HOJ1855); 24 MONTHS \$50,000

#### WAYNE STATE UNIVERSITY

ROL, PIETER K, AND HIMMEL, LAWRENCE; EXO-ELECTRON STUDIES OF SURFACE DAMAGE OF LASER MATERIALS (HOSEGOS), 24 MONTHS \$75,900

#### MINNESOTA

## UNIVERSITY OF MINNESOTA

TOTH, LOUIS E; ELECTRONIC STRUCTURE AND MAGNETIC PROPER-TIES OF TRANSITION METAL CARBIDES, NITRIDES AND BORIDES (K030701): 24 MONTHS \$71,100

#### MISSISSIPPI

## MISSISSIPPI STATE UNIVERSITY

MORRIS, DON H; RESEARCH INITIATION - CHARACTERIZATION STU-DIES OF A POLYESTER RESIN FOR USE IN PHOTOELASTO-PLASTICITY (Hoseets); 18 MONTHS \$16,000

## MISSOURI

## CLARK, J B; OTHER PROGRAM AWARDS (01AWDS); 15 MONTHS \$50,800

UNIVERSITY OF MISSOURI, ROLLA

CLARK, JOHN B: GENESIS OF CELLULAR PRECIPITATION (1/3/2579); 24 MONTHS \$67,100

RREIDL, NORBERT J; SILVER BORATE GLASSES (HOSESSE); 24 MONTHS \$40,900

JAMES, WILLIAM J; ELECTRONIC SURFACE STATES AND SURFACE STRUCTURE CHARACTERIZATION OF SEMICONDUCTORS (HOS4551); 12 MONTHS \$44,000

## WASHINGTON UNIVERSITY

MULLER, MARCEL W; APPLIED MICROMAGNETICS (HOJEOOO): 24 MONTHS \$65,000

KARDOS, JOHN L, AND HILL, CHRISTOPHER T; POLYMERIC MATRIX COMPOSITE MATERIALS (HOULSPI), 12 MONTHS \$70,000

## UNIVERSITY OF NEBRASKA AT LINCOLN

BASHARA, N M; SURFACE ELL!PSOMETRY (Kosocso); 24 MONTHS \$71,000

## NEW JERSEY

## RUTGERS UNIVERSITY

WEISSMAN, SIGMUND: ELUCIDATION OF CRACK PROPAGATION AND FRACTURE MECHANISM IN CRYSTALS BY X-RAY PENDELLOSUNG FRINGES (HOS4450); 12 MONTHS \$48,100

SAUER, J A, AND MORROW, D R; FATIGUE OF HIGH POLYMERS (K030681); 24 MONTHS \$63,300

## **NEW YORK**

## COLLEGE OF ENVIRONMENTAL SCIENCE AND FORESTRY

MARTON, RENATA; INVESTIGATION OF THE FINE STRUCTURE OF WOOD FIBERS (K)12857 001); 24 MONTHS \$65,500

## **COLUMBIA UNIVERSITY**

PAUL, DAVID I; THE ELECTRON MICROSCOPY OF FERROMAGNETIC MATERIALS (HOSSISS); 12 MONTHS \$24,900

BALLANTYNE, JOSEPH M; PHYSICS AND MATERIALS FOR ELEC-TROLUMINESCENT METALINSULATOR-SEMICONDUCTOR DEVICES (Host#56); 12 MONTHS \$40,000



## POLYTECHNIC INSTITUTE OF BROOKLYN

CASTLEMAN, LOUIS S; EFFECTS OF THERMOMECHANICAL TREAT-MENT ON PRECIPITATION PHENOMENA IN AND MECHANICAL PRO-PERTIES OF NICKEL-BASE BINARY ALLOYS (HOSPINS); 12 MONTHS 888,000

#### BENSSELAER POLYTECHNIC INSTITUTE

HUDSON, JOHN B; VAPOR-CRYSTAL NUCLEATION (HOSISIS); 24 MONTHS \$56,000

MACCRONE, ROBERT K; SEMI-CONDUCTION IN OXIDE GLASSES (HOUSE), 24 MONTHS \$69,400

#### SYNACUSE UNIVERSITY

SCHRODER, KLAUS; CRACK GROWTH AND CRACK DISTRIBUTION STUDY BY BARKHAUSEN EFFECT (HOSFIS), 24 MONTHS \$60,000 KELLER, D V JR; TRIBOLOGY IN METALLIC SYSTEMS (HOSSES), 12 MONTHS \$29,900

#### CORNELL UNIVERSITY-MEDICAL COLLEGE

RUBIN, ALBERT L; COLLAGEN AS A BIOMATERIAL (HOSLING X00), 12 MONTHS \$164,000

#### **NORTH CAROUNA**

#### DUKE UNIVERSITY

HACKER, HERBERT JR; ELECTRIC AND MAGNETIC PROPERTIES OF RARE EARTH COMPOUNDS (HOLIST); 24 MONTHS \$41,500

#### NORTH CAROLINA STATE UNIVERSITY A? RALEIGH

BAILEY, JOHN A; STUDY OF SURFACE INTEGRITY IN THE MACHIN-ING OF CERTAIN HIGH STRENGTH MATERIALS (HOUSIVE); 24 MONTHS \$69,200

TISCHER, FREDERICK J; ELECTRIC PROPERTIES OF METALLIC SUR-FACES AT MILLIMETER-WAVE FREQUENCIES (HOSI414); 12 MONTHS 185.000

#### ОНЮ

#### CASE WESTERN RESERVE UNIVERSITY

ANGUS, JOHN C, AND GARDNER, NELSON C; VAPOR GROWTH OF DIAMOND AT LOW PRESSURES (HOLLES XOO); 12 MONTHS \$59,900 COOPER, A R, AND HEUER, A H; ACTIVATION ANALYSIS STUDY OF

DIFFUSION IN OXIDES (HOJIII); 12 MONTHS \$54,400

BBERT, L J; DEVELOPMENT OF DUCTILE FIBER COMPOSITES AND THE TECHNOLOGY FOR PRODUCING THEM (HOSSIGE), 12 MONTHS \$44,600 HEHEMANN, R F; LATTICE INSTABILITY AND THE STRUCTURE OF MARTENSITES (HOSSISS), 12 MONTHS \$44,600

VUKCEVICH, MILAN R; A NEW APPROACH TO THE THEORY OF BRIT-TLE FRACTURE (Kojajsj.): 24 MONTHS \$61,500

THOMPSON, ERIC D; SPIN ORBIT COUPLING IN THE FERROMAGNETIC METALS (KOJO701); 24 MONTHS \$68,000

## OHIO STATE UNIVERSITY

POWELL, GORDON W: LOCAL EQUILIBRIUM AND DIFFUSION IN MULTIPHASE COUPLES (Hostical); 12 MONTHS \$14,200

HIRTH, JOHN P. DISLOCATION SOURCES IN THE MICROSTRAIN RE-GION (HOLLS & X00), 12 MONTHS 444,000

## UNIVERSITY OF CINCINNATI

KUHN, W E, AND HALL, 3; A NERVE IMPLANT PROSTHESIS FOR FACILITATING PERIPHERAL NERVE REGENERATION (Hossers); 24 MONTHS \$19,000

## **OKLAHOMA**

## UNIVERSITY OF OKLAHOMA

MARTINSEN, WILLIAM E; RESEARCH INITIATION - SINTERING OF A1203 IN A GLOW DISCHARGE (H0J2612); 18 MONTHS \$16,000

## ORIGON

## OREGON GRADUATE CENTER

RUDY, ERWIN; HARD AND WEAR-RESISTANT MATERIALS (H090875); 24 MONTHS \$108,100

## OREGON GRADUATE CENTER FOR STUDY & RESEARCH

RUDY, ERWIN; HARD AND WEAR-RESISTANT MATERIALS (HOSGETS OOT): \$26,300

## PENNSYLVANIA

## CARNEGIE-MELLON UNIVERSITY

MASSALSKI, T B, AND VASSAMILLET, L F; A STUDY OF METASTABLE ALLOYS PRODUCED BY THE RAPID COOLING TECHNIQUES (HOSI718); 12 MONTHS \$27,700

GRAGG, JOHN E IR; RESEARCH INITIATION - COMPUTER AIDED IN-TERPRETATION OF RADIOGRAPHIC STUDIES OF DEFECTS IN EN-GINEERING MATERIALS (HOSSIIS); 18 MONTHS \$16,000

HECKEL, R W; DIFFUSION ANALYSIS IN ENGINEERING MATERIALS SYSTEMS (HOS4674): 24 MONTHS \$90,000

MILNES, A G; TRAPS AND DEEP IMPURITY LEVELS IN SEMICON-DUCTOR JUNCTION STRUCTURES (KGS0622); 24 MONTHS \$65,000

#### DREXEL UNIVERSITY

HERCZFELD, PETER R; DC AND MICROWAVE BIASED PHOTOCON-DUCTIVITY STUDIES (HOMETOT): 24 MONTHS \$70,000 BEARD, RICHARD B; POROUS ELECTRODES FOR USE IN IMPLANTA-

BLE POWER SOURCES (HOMFA); 24 MONTHS \$80,000

#### LEHIGH UNIVERSITY

AVITZUR, BETZALEL; FORGING AND EXTRUSION OF POWDER METALLURGY PREFORMS (HOMOIO), 24 MONTHS \$70,000

KRAUSS, GEORGE JR; ANALYSIS OF MICROSTPUCTURE AND STRENGTH OF LATH MARTENSITE (HOSSIGS); 12 MONTHS \$39,500

SPERLING, L H; INTERPENETRATILIO POLYMER NETWORK MATERI-ALS (KOISISS 601); 24 MONTHS 868,000

GROOVER, MIKELL P, AND LEVY, EDWARD K; TEMPERATURE MEASUREMENT IN METAL CUTTING (KOMMIN): 22 MONTHS \$67,200

#### PENNSYLVANIA BYATE UNIVERSITY

HARRISON, IAN R; RESEARCH INITIATION - UTILIZATION OF CHAIN FOLDING (HOISES), 18 MONTHS \$16,000

WHITE, WILLIAM B; CRYSTAL CHEMISTRY AND CRYSTAL GROWTH OF ELECTRONICALLY ACTIVE MATERIALS (HOSISO); 12 MONTHS \$30,000 THROWER, PETER A, AND WALKER, PHILIP L JR; PREPARATION OF CHEMICALLY VAPOR DEPOSITED CARBONS (HOSIS); 12 MONTHS \$100,000

BARSCH, GERHARD R; NONLINEAR ELASTIC AND THERMOELASTIC PROPERTIES OF IONIC MATERIALS AND INTERMETALLIC COM-POUNDS (HOSISTER): 12 MONTHS \$40,000

VEDAM, K; OPTICAL PROPERTIES OF MATERIALS UNDER HIGH PRESSURE (HO1444), 12 MONTHS \$38,500

ROY, RUSTUM; PREPARATION AND CHARACTERIZATION OF MATERIALS (HOSISAT): 12 MONTHS \$245,000

WORRELL, WAYNE L; HIGH TEMPERATURE THERMODYNAMIC AND KINETIC INVESTIGATIONS OF THE FORMATION OF TRANSITION METAL-NOBLE METAL COMPOUNDS (HOURSE); 12 MONTHS \$40,000

## UNIVERSITY OF PITTSBUPGH

PLAZEK, D J; THE LINEAR VISCOELASTIC RESPONSE OF WELL-DEFINED AMORPHOUS POLYMERIC SYSTEMS (HOJ3550), 24 MONTHS \$70,000

MAGILL, J R; MORPHOLOGY AND CRYSTALLIZATION BEHAVIOR OF POLYSILOXANES (HOJSJS): 24 MONTHS \$70,000

#### **SOUTH CAROUNA**

## CLEMSON UNIVERSITY

HULBERT, SAMUEL F; SYMPOSIUM ON MATERIALS AND DESIGN CONSIDERATIONS FOR THE ATTACHMENT OF PROSTHESES TO THE MUSCULO-SKELETAL SYSTEM, TO BE HELD APRIL 3-6, 1972 (H032576); & MONTHS \$2,000

KLAWITTER, JEROME J; RESEARCH INITIATION- AN EVALUATION OF POROUS CERAMICS (HOSPIJO); 18 MONTHS \$16,000

## TENNESSEE

## VANDERBILT UNIVERSITY

BAYUZICK, ROBERT J; ATOMIC NATURE OF GRAIN BOUNDARIES (HOJITIA), 24 MONTHS \$50,000

BAYUZICK, ROBERT J. AND PACKMAN, PAUL F; A FIELD ION MICROSCOPY INVESTIGATION OF THE ATOMIC PROCESSES LEADING TO FATIGUE CRACK INITIATION IN METALLIC MATERIALS (HOSI715); 12 MONTHS 140,000

## TEXAS

## NATIONAL ASSOCIATION OF CORROSION ENGINEERS

STAERLE, R W; INTERNATIONAL CONFERENCE ON LOCALIZED CORROSION, WILLIAMSBURG, VIRGINIA, DECEMBER 4-10, 1971 (Hosial4); 18 MONTHS \$2,000

## RICE UNIVERSITY

BOURNE, HENRY C; PROPERTIES OF THIN MAGNETIC FILMS (HOJIS84); 24 MONTHS \$75,000

## SOUTHERN METHODIST UNIVERSITY

LEONARD, WILLIAM F; THERMOELECTRIC POWER OF NOBLE METALS (HOSJ178); 24 MONTHS \$63,700

## UTAH

## UNIVERSITY OF UTAH

DEVRIES, K. L. ELECTRON PARAMAGNETIC RESONANCE INVESTIGA-TION OF SURFACE AND ENVIRONMENTAL EFFECTS (HOSIBAR); 24 MONTHS \$65,000

BOYD, RICHARD H; RELAXATION AND STRUCTURE IN POLYMERIC MATERIALS (HOLLIST), 24 MONTHS \$69,400

BREITLING, S M; THE PREDICTION OF MECHANICAL BEHAVIOR FROM THE POLYMER CHEMICAL STRUCTURE (HOSISES): 12 MONTHS MAN 400

BYRNE, J G; IMPROVEMENT OF THE MECHANICAL PROPERTIES OF CHEMICALLY VAPOR DEPOSITED REFRACTORY METALS (HOSIGIF); 12 MONTHS \$35,000



#### VIRGINIA

VIRGINIA POLYTECHNIC INSTITUTE

HOUSKA, C R; VOLUME DIFFUSION IN POLYCRYSTALS BY X-RAY DIFFRACTION (ROSOISO); 24 MONTHS \$70,200

#### WASHINGTON

WASHINGTON STATE UNIVERSITY

MASSON, D BRUCE; FERMI SURFACE OVERLAP AND COMPONENT THERMODYNAMIC ACTIVITY (ROJIDIO); 24 MONTHS \$40,000

#### WISCONSIN

MARQUETTE UNIVERSITY

BREBRICK, ROBERT F; MEASUREMENT AND ANA'YSIS OF THE PAR-TIAL PRESSURES OVER ENSE(S) AND CDSE(S) AND THE LIQUIDS FROM WHICH THEY CRYSTALLIZE (HOSJOOD); 24 MONTHS \$97,900

university of wisconsin, madison

COOPER, S. L; INTERMOLECULAR BONDING IN BLOCK COPOLYMER BLASTOMERS (HOJ1747); 24 MONTHS \$64,600

DODD, R A; POINT DEFECTS AND IMPURITIES IN CSCI TYPE OR-DERED PHASES, AND THEIR EFFECTS ON MECHANICAL PROPERTIES (HOLLIS); 12 MONTHS \$35,000

## MATERIALS RESEARCH LABORATORIES

#### CALIFORNIA

STANFORD UNIVERSITY

HUGGINS, ROBERT A; MAYERIALS RESEARCH LABORATORY PROGRAM (HOSSES); 15 MONTHS \$1,118,900

#### KLINOIS

NORTHWESTERN UNIVERSITY

WHITMORE, DONALD H; BASIC AND APPLIED RESEARCH IN MATERIALS (HOJS73"), 12 MONTHS \$1,104,200

UNIVERSITY OF CHICAGO

LIGHT, JOHN C; RESEARCH IN MATERIALS SCIENCES (HOSIESE); 12 MONTHS \$146,400

UNIVERSITY OF ILLINOIS AT URBANA

MAURER, ROBERT J; MATERIALS SCIENCES RESEARCH (HOJJEJ4); 15 MONTHS \$1,329,200

#### INDIANA

PURDUE UNIVERSITY

HONIO, J M; MATERIALS RESEARCH LABORATORIES PROGRAM (HOJJS74"); 12 MONTHS \$765,700

#### MARYLAND

UNIVERSITY OF MARYLAND, COLLEGE PARK

LIPPINCOTT, ELLIS R; INTERDISCIPLINARY RESEARCH IN MATERIALS SCIENCES (Hossisti); 12 MONTHS \$418,800

#### MASSACHUSETTS

HARVARD UNIVERSITY

MCKINNEY, PETER S; SUPPORT OF MATERIALS RESEARCH LABORATORY (HOJJ378); 12 MONTHS \$620,200

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

LAX, BENJAMIN; CONTRACT FOR OPERATION OF A HIGH MAGNET FIELD RESEARCH AND DEVELOPMENT LABORATORY (C470000 001); 5 MONTHS \$930.000

MONTHS \$90,000

LAX, BENJAMIN; OPERATION OF A HIGH MAGNET FIELD RESEARCH AND DEVELOPMENT LABORATORY (C470000 001); T MONTHS \$1,170,000

LAX, BENJAMIN; OPERATION OF A HIGH MAGNET FIELD RESEARCH AND DEVELOPMENT LABORATORY (C470000 001\*); \$100,000

GRANT, NICHOLAS J; INTERDISCIPLINARY MATERIALS RESEARCH (HOSSESS); 18 MONTHS \$1,500,000

#### NEW YORK

CORNELL UNIVERSITY

HUGHES, ROBERT E; INTERDISCIPLINARY MATERIALS RESEARCH (HOJJAJN; 15 MONTHS \$1,832,700

#### **NORTH CAROLINA**

University of north Carolina at Chapel Hill

SMITH, CHARLES S JR; SUPPORT OF THE MATERIALS RESEARCH CENTER (HOSSES); 12 MONTHS \$565,700

#### PENNSYLVANIA

UNIVERSITY OF PENNSYLVANIA

LANGENBERG, D N: MATERIALS RESEARCH PROGRAM (HOSSESS); 16 MONTHS \$1,572,300

RHODE ISLAND

BROWN UNIVERSITY

HELLER, GERALD S; SUPPORT OF THE MATERIALS RESEARCH LABORATORY (HOJSEJ); 15 MONTHS \$1,163,900

# INSTITUTIONAL SUPPORT FOR SCIENCE AND COMPUTING ACTIVITIES

## INSTITUTIONAL GRANTS FOR SCIENCE

#### ALABAMA

ALABAMA AGRICULTURAL AND MECHANICAL UNIVERSITY (U003): 49,444

ALABAMA STATE UNIVERSITY (U004045): \$4,185

AUBURN UNIVERSITY (U00J188 008); \$43,890

LIVINGSTON UNIVERSITY (Ucoses oci); \$7,533

OAKWOOD COLLEGE (U001016): \$8.653

TALLADEGA COLLEGE

TROY STATE UNIVERSITY (U001401 004); \$4,185

TUSKEGEE INSTITUTE (U003203 002); \$13,915

University of Alabama in Birmingham (U001103 008); \$21,147

University of Alabama in Huntsville (U003904 009); \$21,147

UNIVERSITY OF ALABAMA, TUSCALOOSA (U003203 002): \$18.918

UNIVERSITY OF SOUTH ALABAMA (Uoo4048); 48,427

ALASKA

UNIVERSITY OF ALASKA (U003107 002); \$66,893

## ARIZONA

ARIZONA STATE UNIVERSITY (U003208 002); \$20,075

MESA COMMUNITY COLLEGE (U004049); \$1,674

NAVAJO COMMUNITY COLLEGE (U003873); \$20,912

NORTHERN ARIZONA UNIVERSITY (U003203 002); \$10,299

PRESCOTT COLLEGE (U004050); \$6,696

UNIVERSITY OF ARIZONA
(U003811 008): \$78.850

## ARKANSAS

AGRICULTURAL MECHANICAL ANORMAL COL OF ARKANSAS (Ucosses 4001); \$8,596

ARKANSAS STATE UNIVERSITY (U003111 001); \$8,502

HARDING COLLEGE (Uoosers GOI); \$9,030 SOUTHERN STATE COLLEGE

(U004051); \$8,870

UNIVERSITY OF ARKANSAS (U003211 002); \$46,818

#### CALIFORNIA

CALIFORNIA INSTITUTE OF TECHNOLOGY (Ucostis cos); \$86,940

CALIFORNIA STATE COLLEGE AT SAN BERNARDING (Uooses 001): \$8841

CALIFORNIA STATE COLLEGE AT SONOMA (Ucostat cos); \$1,674

CALIFORNIA STATE COLLEGE AT STANISLAUS (U003889 001); \$8,465

CALIFORNIA STATE POLYTECHNIC UNIV, POMONA (Ucouses cos); \$4,596

CALIFORNIA STATE UNIVERSITY, CHICO (Uocsess 000); \$9,500

CALIFORNIA STATE UNIVERSITY, FRESNO (Ugasso 001): \$14,996

CALIFORNIA STATE UNIVERSITY, FULLERTON (UO.317 002); \$9,256

California State University, Humboldt (U005831 002); \$8,879

CALIFORNIA STATE UNIVERSITY, LONG BEACH (Uoosess cos); \$9,105

CALIFORNIA STATE UNIVERSITY, LOS ANGELES (Uoosteo cos); \$10,818

CALIFORNIA STATE UNIVERSITY, SACRAMENTO (U005241 002); \$9,557

CALIFORNIA STATE UNIVERSITY, SAN DIEGO (UGO1218 002): \$25.558

CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO (U003244 002); \$10,668

California State University, San Jose (U003945 009); \$12,710

CALIFORNIA STATE UNIVERSITY, SAN LUIS OBIS PO (Uoosess 002), \$8,897

CHAPMAN COLLEGE (U004052); \$8.870

CLAREMONT GRADUATE SCHOOL (Uoosees 00s); \$8,841

CLAREMONT MENSS COLLEGE (U003227 001); \$6,408

COLLEGE OF MARIN

COLLEGE OF NOTRE DAME (U001228 008); \$8,408

CUESTA COLLEGE (U004054); \$1,674

HARVEY MUDD COLLEGE (Uoccase 00s); \$8,558



IMMACULATE HEART COLLEGE (U003834 008); \$2,611

LANEY COLLEGE (U003884 001); \$12,509

LOMA LINDA UNIVERSITY (U003233 002); \$9,048

LOS ANGELES CITY COLLEGE (Uoc 1053); \$10,801

MERRITT COLLEGE (Uoosssi 601); \$12,809

MILLS COLLEGE (U003137 001); \$8,370

OCCIDENTAL COLLEGE (U003238 008); \$8,683

PACIFIC COLLEGE: (U003481 001); \$1,674

PACIFIC OAKS COLLEGE (U003239 002); \$10,249

PRPPRRDING UNIVERSITY (U003841 001); \$9,349

POMONA COLLEGE (U003140 001); \$8,691

SAN DIZGO DISTRICT COMMUNITY COLLEGES SYS OFF (L'003887 001); \$22,436

STANFORD UNIVERSITY (U001814 008); \$90,401

UNITED STATES INTERNATIONAL UNIVERSITY (U003390 001): \$9.010

UNIVERSITY OF CALIFORNIA SYSTEM OFFICE (U003450 002); \$29,320

UNIVERSITY OF CALIFORNIA, BERKELEY (U003431 004); \$93,022

UNIVERSITY OF CALIFORNIA, DAVIS (U003232 002); \$68,956

UNIVERSITY OF CALIFORNIA, IRVINE (U003154 002); \$41,360

UNIVERSITY OF CALIFORNIA, LOS ANGELES (U003334 002); \$93,586

UNIVERSITY OF CALIFORNIA, RIVERSIDE (U003855 003); \$35,603

UNIVERSITY OF CALIFORNIA, SAN DIEGO (U.003154 002); \$97,206

UNIVERSITY OF CALIFORNIA, SANTA BARBARA (U003457 004); \$39,588

UNIVERSITY OF CALIFORNIA, SANTA CRUZ (U003258 001); \$13,296

UNIVERSITY OF REDLANDS (U003160 001); \$2,511

UNIVERSITY OF SAN DIEGO COORDINATE COLLEGES (U003891 001); \$9,557

UNIVERSITY OF SAN FRANCISCO (U003281 602); \$11,270

UNIVERSITY OF SANTA CLARA
(U003161 001); \$10,986

UNIVERSITY OF SOUTHERN CALIFGRNIA (U003883 008); \$69,877

UNIVERSITY OF THE PACIFIC (Ugostes 902): \$11,120

COLORADO

COLORADO COLLEGE (Uoosees oos); \$8,634

COLORADO SCHOOL OF MINES (U'004056): \$28,134

COLORADO STATE UNIVERSITY (Ucoseet 008): \$79.544

LORETTO HEIGHTS COLLEGE (Uoostes oos); \$5,859 MERA COLLEGE (U004037); \$1,674

SOUTHERN COLORADO STAYE COLLEGE (U004053): \$9.331

TEMPLE BUELL COLLEGE (U001869 002); \$4,185

TRINIDAD STATE JUNIOR COLLEGE (Uoo)634); \$2511

UNIVERSITY OF COLORADO (U004060): \$82,980

UNIVERSITY OF DENVER

UNIVERSITY OF NORTHERN COLURADO

CONNECTICUT

CONNECTICUT COLLEGE (Ucosers cos); \$8,502 FAIRFIELD UNIVERSITY (Ucosers cos); \$8,483

(U003274 002); \$8,483 NEW ENGLAND INSTITUTE (U003275 002); \$9,030

SOUTHERN CONNECTICUT STATE COLLEGE (U003892 001): \$8.445

8T JOSEPH COLLEGE (U003276 002); \$7,533

TRINITY COLLEGE (U003277 002); \$8,858

University of BridgePort (U003893 001); \$8,568 University of Connecticut

(U003278 002); \$40,741 UNIVERSITY OF HARTFORD

(Ucode?# 001); \$8,596 WESLEYAN UNIVERSITY (Ucode#0 002); \$18,301

WESTERN CONNECTICUT STATE COLLEGE (U004061); \$8,370

YALE UNIVERSITY (U003288 008); \$82,361

DELAWARE

DELAWARE STATE COLLEGE (U003494 001); \$8,578 UNIVERSITY OF DELAWARE

(U003283 002); \$35,267

DISTRICT OF COLUMBIA

AMERICAN UNIVERSITY (U003284 002); \$35,970

CATHOLIC UNIVERSITY OF AMERICA (U003285 003); \$36,101

DUNBARTON COLLEGE OF HOLY CROSS (U004068); \$8,427

FEDERAL CITY COLLEGE (U003895 001); \$8,709

GALLAUDET COLLEGE (U003286 002): \$12.676

GEORGE WASHINGTON UNIVERSITY (Ucodest 60%); \$64,336

GEORGETOWN UNIVERSITY (U003288 002); \$34,578

HOWARD UNIVERSITY (Uoosess oos); \$20,996

FLORIDA

FLORIDA AGRICULTURAL AND MECHANICAL UNIVERSITY (Uoosees oos); \$8,728

FLORIDA ATLANTIC UNIVERSITY (U003283 002); \$10,785



FLORIDA INSTITUTE OF TECHNOLOGY (U003884 008); \$10,088

PLORIDA PRESBYTERIAN COLLEGE (U003895 000); \$8,389

FLORIDA STATE UNIVERSITY (U003494 008): \$63.881

FLORIDA TECHNOLOGICAL UNIVERSITY (U003287 001); \$9,123

MIAMI-DADE JUNIOR COLLEGE (U003887 001); \$1,674

NOVA UNIVERSITY (U005#89 00#); \$16,694

ST LEO COLLEGE (U004083); \$1,674

BTE ISON UNIVERSITY (U003300 004); \$8,502

UNI /ERSITY OF PLORIDA (U003361 002); \$72,048 UNIVERSITY OF MIAMI

(U003108 002), \$74,242

UNIVERSITY OF SOUTH FLORIDA (U003303 001); \$13,698

#### GEORGIA

ATLANTA UNIVERSITY (1003103 003); \$12,442

CLARK COLLEGE (U003900 001); \$7,533 EXORY UNIVERSITY

(U003307 001): \$27,079 FORT VALLEY STATE CO!LEGE (U00308 002); \$8,841

GEORGIA COLLEGE AT MILLEDGEVILLE (L'001001), \$5,859

GEORGIA INSTITUTE OF TECHNOLOGY (U003308 002); \$66,747

GEORGIA SOUTHERN COLLEGE (U003310 002); \$9,067

GEORGIA STATE UNIVERSITY (U003311 002); \$9,406

MEDICAL COLLEGE OF GEORGIA (U004412 002); \$10,199

MOREHOUSE COLLEGE (U004065), \$8,408

MORRIS BROWN COLLEGE (U004066); \$1.674

UNIVERSITY OF GEORGIA (U003314 002); \$68,496

west georgia college (U004047); \$8,709

GUAM

UNIVERSITY OF GUAM (U004156): \$9,048

HAWAII

UNIVERSITY OF HAWAII (U003318 008); \$17,255

IDAHO

IDARO STATE UNIVERSITY (U003317 002); \$8,427

UNIVERSITY OF IDAHO (U003318 002); \$29,437

**ILLINOIS** 

BLACKBURN COLLEGE (U001803 001); \$1,674

BRADLEY UNIVERSITY (U003380 002); \$8,540

CHICAGO MEDICAL SCHOOL (U004068); \$8,688

CITY COLLEGES OF CHICAGO (U005511 004); \$3,348

DEPAUL UNIVERSITY (U003388 008); \$9,934

BLMHURST COLLEGE (U001069): \$1,674

ILLINOIS BENEDICTINE COLLEGE ((,004111 008): \$8'901

ILLINOIS INSTITUTE OF TECHNOLOGY (U003327 004); \$45,370

ILLINOIS STATE UNIVERSITY (U003388 008); \$8.615

ILLINOIS WESLEYAN UNIVERSITY (U004070); \$1,674

KNOX COLLEGE (U003330 008); \$7,833

LEWIS COLLEGE (U001071): \$4.185

LOYOLA UNIVERSITY (Uoodsas oos); \$10,801

MACMURBAY COLLEGE (U003334 001); \$1,874

NORTH CENTRAL COLLEGE (U003337 008): \$2.511

NORTHERN ILLINOIS UNIVERSITY (U004072); \$12,208

NORTHWESTERN UNIVERSITY (U003339 002); \$68,500

QUINCY COLLEGE (U004074); \$8,502

ROOSEVELT UNIVERSITY (U003341 002); \$8,370

SOUTHERN ILLINOIS UNIVERSITY - CARBONDALE (U003343 004); \$12,810

Southern Illinois University - Bowardsville (U003905 001); \$9,161

TRITON COLLEGE (U001071); \$9,821

UNIVERSITY OF CHICAGO (U003148 001): \$90,884

UNIVERSITY OF ILLINOIS AT CHICAGO CIRCLE (U003317 002); \$25,863

UNIVERSITY OF ILLINOIS AT URBANA (U003449 002); \$96,885

University of Illinois System Office (U004448 009); \$12,459

## INDIANA

BALL STATE UNIVERSITY (U'003351 002); \$1,874

DEPAUW UNIVERSITY

(L'003352 002); \$8,427 EARLHAM COLLEGE

(U003353 002); \$8,653

Indiana State University (U003355 002); \$8,370

INDIANA UNIVERSITY, BLOOMINGTON

(U001158 002); \$62,428 indiana university, indianapolis

(U001906 001); \$9,670

MANCHESTER COLLEGE (U003357 001); \$1,674

PURDUE UNIVERSITY

(U003358 008); \$85,865

Rose-Hulman institute of technology (U003359 001); \$8,578

ST MARYOS COLLEGE

(UPOSPO7 001); \$1,674



UNIVERSITY OF NOTRE DAME (UO03164 002); \$42,105

**IOWA** 

BUBNA VISTA COLLEGE (U004075): \$1.674

CENTRAL COLLEGE (U003366 002); \$1,674

COE COLLEGE (U003368 002); \$5,022

CORNELL COLLEGE (U003349 002); \$3,348

DORDT COLLEGE (U003370 008); \$2,511

DRAKE UNIVERSITY (U003371 001); \$9,218

GRINNBLL COLLEGE (U003374 008); \$8,615

IOWA STATE UNIVERSITY OF SCIENCE & TECHNOLOGY (U003373 002); \$52,638

LUTHER COLLEGE (Uoossie oce); \$2,511

EIMPS/IN COLLEGE (U003505 001); \$1,674

UNIVERSITY OF 10WA (U005378 002); \$61,231 WARTBURG COLLEGE (U001076); \$1,674

KANSAS

BENEDICTINE COLLEGE (U003388 000); \$2,511

MANSAS STATE COLLEGE OF PITTSBURG (U003385 002): \$3,848

KANSAS STATE UNIVERSITY (U0033#1 00#); \$19,630 OTTAWA UNIVERSITY

(U004077); \$1,674

University of Kansas (U003J90 002); \$49,839

WASHBURN UNIVERSITY OF TOPEKA (U003191 001); \$1,674

WICHITA STATE UNIVERSITY (U003392 002); \$8,935

KENTUCKY

BELLARMINE-URSULINE COLLEGE (U003193 003); \$8,502

EASTERN KENTUCKY UNIVERSITY (U003J97 002); \$17,23)

KENTUCKY STATE COLLEGE (U003388 002); \$8,540

MOREHEAD STATE UNIVERSITY (U004389 002); \$12,007

THOMAS MORE COLLEGE (U003913 001); \$5,859

UNIVERSITY OF KENTUCKY (U003401 003); \$65.797

UNIVERSITY OF LOUISVILLE (U003102 002); \$15,221

WESTERN KENTUCKY UNIVERSITY (U003403 002); \$8,578

LOUISIANA

DBLGADO VOCATIONAL TECHNICAL JUNIOR COLLEGE (U001403 001): \$11253

GRAMBI-ING COLLEGE (U003407 002); \$8,691

LOUISIANA STATE UNIVERSITY SYSTEM OFFICE (U001109 701); \$13,396

LOUISIANA STATE UNIVERSITY, BATON ROUGE (U001410 001); \$66,420

LOUISIANA STATE UNIVERSITY, NEW ORLEANS (U003411 004): \$10,969

LOUISIANA TECH UNIVERSITY (Uoosios oos); \$9,256

LOYOLA UNIVERSITY (Uoossis 002); \$8,954

NICHOLLS STATE UNIVERSITY (U003404 001); \$10,299

NORTHBAST LOUISIANA UNIVERSITY (UOCA) 11 000): \$8.389

NORTHWESTERN STATE UNIVERSITY OF LOUISIANA

SOUTHERN UNIVERSITY (Ucostis oce); \$15,070 TULANE UNIVERSITY

(U003414 004); \$27,288

UNIVERSITY OF SOUTHWESTERN LOUISIANA (UOOS) 5 001); \$8,860

XAVIER UNIVERSITY OF LOUISIANA

MAINE

BOWDOIN COLLEGE (Uocidis 008); \$8,691 COLBY COLLEGE

(U003119 009); \$8,370 UNIVERSITY OF MAINE SYSTEM OFFICE (U004139); \$27,592

MARYLAND

BOWIE STATE COLLEGE (U004078); \$8,804

CATONSVILL® COMMUNITY COLLEGE (U004078): \$5,859

CHEEAPBAKE COLLEGE (U005917 001); \$8,408

COLUMBIA UNION COLLEGE (U003918 001); \$7,533

FROSTBURG STATE COLLEGE (Uoosise 001); \$7,533

GOUCHER COLLEGE (U003443 001); \$8,747

HARFORD COMMUNITY COLLEGE (U004080); \$1,674

Johns Hopkins University (Uoos424 002); \$69,525

MORGAN STATE COLLEGE (U001446 002): \$8,766

UNIVERSITY OF MARYLAND, COLLEGE PARK (Uoos 427 002); \$87,649

WESTERN MARYLAND COLLEGE (Uggs) 001): \$8.598

MASSACHUSETTS

AMHERST COLLEGE (U003430 002); \$9,538

BOSTON COLLEGE (U003431 003); \$32,820

BOSTON UNIVERSITY (Uoosts's cos); \$35,531

BRANDEIS UNIVERSITY

(U001411 002); \$49,496

BRIDGEWATER STATE COLLEGE (U004081): \$8,784

CLARK UNIVERSITY (U003434 009); \$13,162

COLLEGE OF THE HOLY CROSS (Ucostats cos); \$9,105



RMERSON COLLEGE 17700 IAMES: \$3 848

BMMANUEL COLLEGE COORISE COOL BIS BOD

FORSYTH SCHOOL OF DENTAL HYGIENISTS (U00 1083) \$9.123

GORDON COLLEGE (U001081): \$1.474

HARVARD UNIVERSITY (U004448 001): \$92.182

LOWELL STATE COLLEGE (U004085): \$1.674

LOWBLE TECHNOLOGICAL INSTITUTE (U00#149 00#); \$20,069

MASSACHUSETTS INSTITUTE OF TECHNOLOGY (U005140 004); \$121 394

MASSASOIT COMMUNITY COLLEGE (U00 (084); \$1,674

MOUNT HOLYOKE COLLEGE (U004148 008); \$5,859 NORTHEASTERN UNIVERSITY

(U003443 008): \$35.443 REGIS COLLEGE

(U003531 001); \$11,689 SIMMONS COLLEGE

(17001087): \$8,427 SMITH COLLEGE (UGOSILIA DOS): SR ROA

SOUTHEASTERN MASSACHUSETTS UNIVERSITY (U003445 002); 18.389

SUFFOLK UNIVERSITY (U001088): \$8.634

TUPTS UNIVERSITY (U003117 002); \$36,482

UNIVERSITY OF MASSACHUSETTS, AMHERST (U003418 002); \$53,949

WELLESLRY COLLEGE (U001444 002): \$8,427 WENTWORTH INSTITUTE

(U003450 002): \$21.431 WHEATON COLLEGE

(U003131 002): \$6 596 WILLIAMS COLLEGE (U003452 002); \$11,120

WOODS HOLE OCEANOGRAPHIC INSTITUTION (U003921 001): \$84.926

WORCESTER POLYTECHNIC INSTITUTE (U003433 002); \$12,760

MICHIGAN

ADRIAN COLLEGE (U001928 001): \$6,696 ALBION COLLEGE

(U008454 008); \$1,674 ALMA COLLEGE

(U001455 001); \$8,408 ANDREWS UNIVERSITY

(U001088): \$1.674

CALVIN COLLEGE (U003456 002); \$8,634

BASTERN MICHIGAN UNIVERSITY (U004460 008); \$10,115

GRAND RAPIDS JUNIOR COLLEGE (U004090); \$1,874

HOPE COLLEGE (U003468 002); \$8,973 Kalamazoo College

(U003463 008); \$8,671

LAKS MICHIGAN COLLEGE (17001091): \$1,674

LAKE SUPERIOR STATE COLLEGE 11/0010495 \$1 874

MERCY COLLEGE OF DETROIT (U001141 004); \$8,483

MICHIGAN STATE UNIVERSITY (U003185 008); \$77,582

MICHIGAN TECHNOLOGICAL UNIVERSITY (U003166 004): \$14.049

NASARETH COLLECT ... '004093); \$1,674

NORTHERN MICHIGAN UNIVERSITY (U003467 004); \$8,370

OAKLAND UNIVERSITY (U003468 009); \$10,534

OLIVET COLLEGE (U001091): \$1.874

UNIVERSITY OF DETROIT (U005169 0021: \$10.467

UNIVERSITY OF MICHIGAN (U001470 002); \$95,881

WAYNE STATE UNIVERSITY (U003171 004): 435.369

WESTERN MICHIGAN UNIVERSITY (U00J478 002): \$12.107

MINNESOTA

BETHEL COLLEGE AND SEMINARY (U001095); \$1,674

CARLETON COLLEGE (U003174 002); \$8,768

CONCORDIA COLLEGE AT MOORHEAD (U003933 001); \$1,674

FERGUS FALLS STATE JUNIOR COLLEGE (U001096); \$1,674

GUSTAVUS ADOLPHUS COLLEGE (U001477 004); \$1,674

HAMLINE UNIVERSITY (U003478 002); \$10,047

MACALESTER COLLEGE (U003179 002); \$4,185

MANKATO STATE COLLEGE (U003331 001): \$5.022 MOORHEAD STATE COLLEGE

(U00s480 002); \$8,841

ST OLAF COLLEGE (U003488 002); \$9,312

UNIVERSITY OF MINNESOTA (U003183 002); \$87,735

WINONA STATE COLLEGE (U003484 002); \$8,370

MISSISSIPPI

ALCORN AGRICULTURAL AND MECHANICAL COLLEGE (U003485 008); \$8,596

HOLMES JUNIOR COLLEGE (U004097); \$1,674

MARY HOLMES COLLEGE (U001094); \$10,567

MISSISSIPPI STATE UNIVERSITY (U003487 004); \$48,734

UNIVERSITY OF MISSISSIPPI (U00\$18\$ 008): \$19,774

MISSOURI

LINCOLN UNIVERSITY (U004192 002): \$9,199



MISSOURI BAPTIST COLLEGE

(U004099); \$1,674

MISSOURI WESTERN COLLEGE

(U004100), \$1,674

SOUTHEAST MISSOURI STATE COLLEGE

(U003496 002); \$6,696

SOUTHWEST MISSOURI STATE COLLEGE

(U003498 008); \$8,634

ST LOUIS JUNIOR COLLEGE DISTRICT

(U005835 001); \$8,889

ST LOUIS UNIVERSITY (U003199 001): \$25,869

UNIVERSITY OF MISSOURI, COLUMBIA

(U00\$500 00\$); \$53,011

UNIVERSITY OF MISSOURI, KANSAS CITY

(U005501 001); \$9,010

UNIVERSITY OF MISSOURI, ROLLA

(U003502 002); \$28,793

UNIVERSITY OF MISSOURI, ST LOUIS

(U003503 002); \$11,940

WASHINGTON UNIVERSITY

(U003504 002); \$57,908

## MONTANA

MONTANA COLLEGE OF MINERAL SCIENCE & TECH

(U003505 002); \$9,256

MONTANA STATE UNIVERSITY

(U003508 002); \$35,677

UNIVERSITY OF MONTANA (U005507 008): \$14,434

#### NEBRASKA

CONCORDIA TEACHERS COLLEGE

(U003508 008); \$5,859

CREIGHTON UNIVERSITY

(U003510 002); \$8,671

DANA COLLEGE

(U004101); \$8,691

UNIVERSITY OF NEBRASKA AT LINCOLN

(1/003313 002); \$40,088

UNIVERSITY OF NEBRASKA SYSTEM OFFICE

(U003514 002); \$13,212

## NEVADA

UNIVERSITY OF NEVADA SYSTEM OFFICE

(U003516 002); \$38,196

UNIVERSITY OF NEVADA, LAS VEGAS

(U004102), \$9,349

UNIVERSITY OF NEVADA, RENO

(U003517 002); \$19,690

## **NEW HAMPSHIRE**

DARTMOUTH COLLEGE (U003518 002); \$23,825

FRANKLIN PIERCE COLLEGE

(U004103); \$9,500

UNIVERSITY OF NEW HAMPSHIRE, DURHAM

(U003518 002); \$47,244

## **NEW JERSEY**

COLLEGE OF MEDICINE & DENTISTRY OF NEW JERSEY

(U003525 002); \$8,502

PAIRLEIGH DICKINSON UNIVERSITY

(U003522 002); \$6,696

MONMOUTH COLLEGE (U003521 002): \$8,521

NEWARK COLLEGE OF ENGINEERING

(U003524 002); \$13,882

PRINCETON UNIVERSITY

(U003527 002); \$87,780

RIDER COLLEGE

(U003950 001); \$8,578

RUTGERS UNIVERSITY

(U003588 008); \$51,165

SETON HALL UNIVERSITY

(U003589 008) \8,671

STEVENS INST: (UTE OF TECHNOLOGY

(U001510 002); \$42,468

TRENTON STATE COLLEGE

(U003951 001); \$1,674 UPSALA COLLEGE

PORTA COFFEE

(U004104); \$6,696

WILLIAM PATERSON COLLEGE

(U001103); \$3,848

#### **NEW IAEXICO**

EASTERN NEW MEXICO UNIVERSITY

(U003531 004); \$11,823

NEW MEXICO HIGHLANDS UNIVERSITY

(U003538 008); \$7,533

NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY

(U003533 00#); \$25,014

NEW MEXICO STATE UNIVERSITY

(1'003534 004); \$69,919

UNIVERSITY OF ALBUQUERQUE

(U001538 002); \$8,445

UNIVERSITY OF NEW MEXICO

(U003537 008); \$50,860

## **NEW YORK**

ADELPHI UNIVERSITY

(Uoosssa oos); \$9,801

AGRICULTURAL AND TECH COLLEGE AT ALFRED

(U004113); \$8,784

AGRICULTURAL AND TECH COLLEGE AT CANTON

(U004114); \$1,674

ALBANY MEDICAL COLLEGE (U003540 009); \$30,213

ALFRED UNIVERSITY

(U004106); \$6,696

BANK STREET COLLEGE OF EDUCATION

(U001952 001); \$8,615

BARNARD COLLEGE

(U003541 002); \$9,971

BRONX COMMUNITY COLLEGE (Uoo2157): \$9,199

(0004137); #9,199

BROOKLYN COLLEGE (Uooss 19 oos); \$10,249

CANISIUS COLLEGE

(U001951 001); \$5,022

CITY COLLEGE (U003550 003); \$22,687

CITY UNIVERSITY OF NEW YORK SYSTEM OFFICE

(U00J547 00J); \$14,668

CLARKSON COLLEGE OF TECHNOLOGY

(U003548 008); \$18,067

COLGATE UNIVERSITY (U003545 002); \$9,293

COLLEGE AT BROCKPORT

(U003579 072); \$8,747

COLLEGE AT BUFFALO (U003580 002); \$8,728

(0000000000); 40,148

COLLEGE AT FREDONIA (Uoosse oos): \$9,482

COLLEGE AT NEW PALTZ

(U004584 008): \$8,870

COLLEGE AT ONEONTA
(U004584 001): \$5,022



COLLEGE OF ENVIRONMENTAL SCIENCE AND FORESTRY

COLLEGE OF PHARMACEUTICAL SCIENCES (U004945 001): \$8,389

COLUMBIA UNIVERSITY (U003544 003); \$96,136

COOPER UNION (U001845 001); \$8,804

CORNELL UNIVERSITY (Ucossid ood); \$89,698

DOMINICAN COLLEGE OF BLAUVELT

DOWLING COLLEGE (U004110), \$5,859 FORDHAM UNIVERSITY

(U003554 002); \$12,208 GRADUATE SCHOOL AND UNIVERSITY CENTER (U004107); \$11,672

HAMILTON COLLEGE (Ucosses on), \$6,483

HOBART AND WILLIAM SMITH COLLEGES (U001981 001); \$1,674

HOFSTRA UNIVERSITY (U003556 008); \$10,383

HUNTER COLLEGE (VOO4159); \$11,987 STHACA COLLEGE

(U003357 002); \$5,022 LEHMAN COLLEGE (U001036 001); \$8,445

LONG ISLAND UNIVERSITY (U003559 008); \$12,074

MANBATTAN COLLEGE (U003560 001); \$8,954

MARIST COLLEGE (U003942 001); \$1,674

NEW SCHOOL FOR SOCIAL RESEARCH (U003964 001): \$9,425

NEW YORK MEDICAL COLLEGE (U004385 002); \$10,182

NEW YORK UNIVERSITY (U001566 008); \$80,494

POLYTECHNIC INSTITUTE OF BROOKLYN (Uoosiss oos): \$44,348

QUBENS COLLEGE (U004038 001), \$11,505

QUBENSBOROUGH COMMUNITY COLLEGE (U004108): \$1,674

RENSSELAER POLYTECHNIC INSTITUTE (Uoguses oos); \$62,762

RICHMOND COLLEGE (U003857 001): \$8.804

ROCHESTER INSTITUTE OF TECHNOLOGY (U003570 002); \$11,153

ROCKEFELLER UNIVERSITY (U003571 001); \$16,826

RUSSELL SAGE COLLEGE (U004118): \$4,185

ST BONAVENTURE UNIVERSITY (UCG)\$67 001): \$1.674

8T JOHNS UNIVERSITY (U003375 009); \$8,521 BT LAWRENCE UNIVERSITY

BT LAWRENCE UNIVERSITY (U004576 008), \$9,425

STATE UNIVERSITY AT ALBANY (U003587 008); \$29,129 STATE UNIVERSITY AT BINGHAMTON

STATE UNIVERSITY AT BUFFALO

(Ucosse cos); \$39,837

STATE UNIVERSITY AT STONY BROOK

STATE UNIVERSITY OF NEW YORK SYSTEM OFFICE

SYRACUSE UNIVERSITY (Uoods#1 002); \$59,440

TEACHERS COLLEGE (Uoossee ooe); \$17,447

Union College (U00/59/ 00%); \$9,708

UNIVERSITY OF ROCHESTER

WEBB INSTITUTE OF NAVAL ARCHITECTURE (Voolsed oos): \$3.691

YESHIVA UNIVERSITY (U003597 002); \$54,602

YORK COLLEGE (U001959 001), \$1,674

NEW YORK INSTITUTE OF TECHNOLOGY-NEW YORK CITY CAMPUS (U004111); \$17,012

**NORTH CAROUNA** 

CHOWAN COLLEGE (U004115), \$3,348 DUKE UNIVERSITY (U003600 001), \$69,622 EAST CAROLINA UNIVERSITY

EAST CAROLINA UNIVERSITY (Uoosso: 00s); \$8,634

GASTON COLLEGE (U001116); \$7,533

NORTH CAROLINA AGRICULTURAL & TECH STATE UNIV (U003603 002): \$18911

NORTH CAROLINA CENTRAL UNIVERSITY (U003604 003); \$8,728

NORTH CAROLINA STATE UNIVERSITY AT RALEIGH (U003610 003), \$68,609

NORTH CAROLINA WESLEYAN COLLEGE

(Voo4118); \$1,674 SHAW UNIVERSITY

(U003976 001); \$10,218 ST ANDREWS PRESBYTERIAN COLLEGE (U003606 002); \$9,048

UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL (Uoosfos 009); \$68,967

UNIVERSITY OF NORTH CAROLINA AT GREENSBORO (Upgases 004): \$10,919

WAKE FOREST UNIVERSITY (Uoose12 002); \$9,462

WESTERN CAROLINA UNIVERSITY (U001977 001); \$10.065

**NORTH DAKOTA** 

MINOT STATE COLLEGE (Uoose14 008); \$8,466

NORTH DAKOTA STATE UNIVERSITY (U003615 002); \$28,295

UNIVERSITY OF NORTH DAKOTA (Uoosese oos); \$15,686

OHIO

ANTIOCH COLLEGE (U003417 002); \$10,283



BOWLING GREEN STATE UNIVERSITY

(U003618 008); \$10,047

CASE WESTERN RESERVE UNIVERSITY

(U003620 002); \$71,333

CEDARVILLE COLLEGE

(U004114); \$3,848

CENTRAL STATE UNIVERSITY

(U003621 002); \$13,162

CLEVELAND STATE UNIVERSITY

(U003622 002); \$10,009

COLLEGE OF WOOSTER

(U003483 008): \$8,540

DENISON UNIVERSITY

(U003865 009): \$8.427

HEIDELBERG COLLEGE

(U004180); \$7,533

HIRAM COLLEGE (U003827 002); \$8,502

JOHN CARROLL UNIVERSITY

(U001448 002); \$10,833

KENT STATE UNIVERSITY

(U003629 002); \$22,938

KENYON COLLEGE

(U003630 002); \$8,558

MEDICAL COLLEGE OF ORIO AT TOLEDO

(U004121); \$8,935

MIAMI UNIVERSITY (U003432 003): \$12 927

MUSKINGUM COLLEGE

(U003634 002); \$1,674

**OBERLIN COLLEGE** (U003835 003); \$10,450

**OHIO DOMINICAN COLLEGE** 

(U00 (122): \$1.674

OHIO STATE UNIVERSITY

(U003637 002); \$86,953

OBIO UNIVERSITY

(U003638 003): \$14,819

OHIO WESLEYAN UNIVERSITY (U00 3839 002): \$4.185

UNIVERSITY OF AKRON

(U003641 002); \$11,404

UNIVERSITY OF CINCINNATI (U003848 002); \$41,151

UNIVERSITY OF DAYTON 848,888 :(400 448t00U)

UNIVERSITY OF TOLEDO

(U003644 002); \$11,890

WITTENBERG UNIVERSITY

(U001615 001); \$1,185

WRIGHT STATE UNIVERSITY

(U003646 002); \$15,690

YOUNGSTOWN STATE UNIVERSITY

(U003648 002); \$8,860

OKIAHOMA

CAMERON STATE AGRICULTURAL COLLEGE

EAST CENTRAL STATE COLLEGE

(U003981 001); \$9,745

LANGSTON UNIVERSITY

(U003651 001); \$8,483

OKLAHOMA CHRISTIAN COLLEGE

(U004124): \$8,370

OXLAHOMA CITY UNIVERSITY

(U003433 001): \$8,370

OKLAHOMA STATE UNIVERSITY

(U003654 008); \$51,245

SOUTHWESTERN STATE COLLEGE (U003655 002); \$8.841

UNIVERSITY OF OKLAHOMA

(U003638 002); \$34,109

UNIVERSITY OF TULSA

(U003657 008); \$2,511

OREGON

LINFIELD COLLEGE

(U004125); \$9,369 **OREGON STATE UNIVERSITY** 

(UO01669 002): \$72.918

PORTLAND COMMUNITY COLLEGE

(U004126): \$1,674

PORTLAND STATE UNIVERSITY

(17003883 008): \$9.444

REED COLLEGS

(U003884 008); \$10,165

SOUTHERN OREGON COLLEGE

(U004665 008): \$8,502

UNIVERSITY OF OREGON - EUGENE

(U001668 002); \$68,680

PENNSYLVANIA

ALLEGHENY COLLEGE

(U003889 009): \$2,511

**BRYN MAWR COLLEGE** (U003870 002); \$10,027

**BUCKNELL UNIVERSITY** 

(U001671 009); \$9,482

**BUCKS COUNTY COMMUNITY COLLEGE** 

(U004187): \$1,674

CARNEGIE-MELLON UNIVERSITY

(U003672 002); \$67,797

DICKINSON COLLEGE (U003675 009); \$8,445

DREXEL UNIVERSITY

(U001676 002); \$28,514

DUQUESNE UNIVERSITY

(Ug01677 GOE): \$8,370

ELIZABETHTOWN COLLEGE (U003679 003); \$4,185

FRANKLIN AND MARSHALL COLLEGE

(U003680 002); \$9,274

GENEVA COLLEGE

(U004128); \$5,859

HAHNEMANN MEDICAL COLLEGE AND HOSPITAL (U003683 002): \$12,743

HAVERFORD COLLEGE

(U001684 002); \$8,935

HOLY FAMILY COLLEGE

(U004129); \$2,511

JUNIATA COLLEGE (U001686 002); \$5,859

LAFAYETTE COLLEGE

(U'001687 002); \$8,389

LEHIGH UNIVERSITY

(U003688 002); \$46,993 LINCOLN UNIVERSITY

(U003689 002); \$8,558

LOCK HAVEN STATE COLLEGE

(U004140): \$1,874

LYCOMING COLLEGE

(U003690 002); \$4,185

MEDICAL COLLEGE OF PENNSYLVANIA

(U003710 DO2); \$10,483

MESSIAH COLLEGE

(U001131); \$837

MILLERSVILLE STATE COLLEG®

(U003692 002); \$1,674



MUHLENBERG COLLEGE (U005495 001): \$6.859

PENNSYLYANIA STATE UNIVERSITY (U003695 008): \$78,314

PRILADELPRIA COLLEGE OF TEXTILES AND SCIENCE (VO03847 001); 49,312

PMC COLLEGES (Ucoses) cos); \$8,747

Shippensburg State College (Vocuss) (001), \$3,348

SLIPPERY ROCK STATE COLLEGE (Ucossiss): 48,427

SUSQUERANNA UNIVERSITY (U003995 001): \$5,022

SWARTHMORE COLLEGE (U003499 002), \$10,805

TEMPLE UNIVERSITY (Ucostoc cos): \$33,582

THOMAS IRFFERSON UNIVERSITY HOSPITAL (U003688 008); \$13,463

UNIVERSITY OF PENNSYLVANIA (Uoostos oos): \$78,142

UNIVERSITY OF PITTSBURGH (U003103 002); \$66,847

UNIVERSITY OF SCRANTON (U004/34), \$1,674

WESTMINSTER COLLEGE (U003708 003); \$3,348

WILSON COLLEGE (U003709 001); \$1,674

**PUERTO RICO** 

UNIVERSITY OF PUERTO RICO SYSTEM OFFICE (U'003838 003): \$24,428

UNIVERSITY OF PUERTO RICO, MAYAGUEZ (U003888 003); \$33,318

UNIVERSITY OF PUERTO RICO, RIO PIEDRAS (U003830 002); \$9,274

RHODE ISLAND

BROWN UNIVERSITY (Ucostil 002); \$52,643

PROVIDENCE COLLEGE (U'001712 001); \$8,653

RHODE ISLAND COLLEGE (U003714 602); \$8,658

UNIVERSITY OF RHODE ISLAND (U003711 003); \$48,692

SOUTH CAROUNA

CLAFLIN COLLEGE (U004134): 11,674

CLEMSON UNIVERSITY (U033715 002); \$42,063

FURMAN UNIVERSITY (U003717 002); \$8,465

MEDICAL UNIVERSITY OF SOUTH CAROLINA (U003718 002); \$17,548

SOUTH CAROLINA STATE COLLEGE (U003718 008); \$8,871

UNIVERSITY OF SOUTH CAROLINA (U003720 002), \$18,268

SOUTH DAKOTA

AUGUSTANA COLLEGE (U009722 002), \$8,935

SOUTH DAKOTA SCHOOL OF MINES AND TECHNOLOGY (Voostes 60s): \$20,946

BOUTH DAKOTA STATE UNIVERSITY (U003784 003); \$34,886

UNIVERSITY OF SOUTH DAKOTA

TENNESSEE

CLEVELAND STATE COMMUNITY COLLEGE (U001133), \$1,674

FISK UNIVERSITY (U004004 001); \$8,747

GEORGE PEABODY COLLEGE FOR TEACHERS
(U'001741 009), \$12,107

MEMPHIS STATE UNIVERSITY (University \$11,990)

SOUTHWESTERN AT MEMPHIS (UO03736 001): \$6.696

TENNESSEE STATE UNIVERSITY (U003737 002); \$9,462

TENNESSEE TECHNOLOGICAL UNIVERSITY (U003738 003); \$10,718

UNIVERSITY OF TENNESSRE SYSTEM OFFICE (U003739 009), \$16,376

UNIVERSITY OF TENNESSEE, KNOXVILLE (U003740 008): \$67,307

VANDERBILT UNIVERSITY (Uocur) 18 000): \$39,612

TEXAS

BAYLOR COLLEGE OF MEDICINE (U001116), \$28,178

BAYLOR UNIVERSITY (Uoosiss oom); \$14,685

(Uootist); \$8,636

DALLAS COUNTY JUNIOR COLLEGE DISTRICT (U004138); \$1,674

HOUSTON BAPTIST COLLEGE (U004/38); \$9,105

LAMAR UNIVERSITY (U003745 002); \$8,671

MCLENNAN COMMUNITY COLLEGE (Uoo4140); \$1,674

MCMURRY COLLEGE (U004141); \$1,674

NORTH TEXAS STATE UNIVERSITY (U003747 002); \$9,274

PRAIRIE VIEW AGRICULTURAL & MECHANICAL COLLEGE (U001719 002); \$9,557

RICE UNIVERSITY (U003750 002); \$60,846

SAM HOUSTON STATE UNIVERSITY (U004731 002); \$6,696

SAN ANTONIO COLLEGE (U'001112); \$1,674

SOUTHERN METHODIST UNIVERSITY (U003752 009); \$30,609

SOUTHWEST TEXAS STATE UNIVERSITY (U003733 003); \$8,691

SOUTHWESTERN UNIVERSITY (U001015 001); \$1,674

STEPHEN F AUSTIN STATE UNIVERSITY (U003754 001); \$8,663

SUL ROSS STATE UNIVERSITY (UGG/155 001); \$8,502

TARRANT COUNTY JUNIOR COLLEGE (U004145); \$5,869

TEXAS A & 1 UNIVERSITY (U004018 001); \$9,274

TEXAS A & M UNIVERSITY (U903788 003); \$76,142



TEXAS CHRISTIAN UNIVERSITY (1/00/22/2009): \$12.409

TEXAS SOUTHERN UNIVERSITY

TEXAS TECH UNIVERSITY (U004759 008); \$20,745

TEXAS WOMANOS UNIVERSITY (Ucosted cos); \$9,161

TRINITY UNIVERSITY

(U001741 008); \$8,596

UNIV OF TEXAS AT ABLINGTON (U003765 000); \$9,831

UNIV OF TEXAS AT AUSTIN (U003764 002); \$96,013

UNIV OF TEXAS AT DALLAS (U004000 001): \$54,669

UNIV OF TEXAS AT EL PASO (U003747 004); \$16,643

UNIV OF TRIAS SYSTEM OFFICE (U003764 608); \$38,517

University of Houston (Uocatée 002); \$32,265

UNIVERSITY OF ST THOMAS

WEST TEXAS STATE UNIVERSITY

UTAH

BRIGHAM YOUNG UNIVERSITY (U004768 004); \$17,682

UNIVERSITY OF UTAH (U003769 002); \$73,041

UTAH STATE UNIVERSITY (U003770 002); \$58,117

WEBER STATE COLLEGE (U004771 004); \$8,653

VERMONT

MIDDLEBURY COLLEGE (U001143): \$8,992

TRINITY COLLEGE (U004148); \$10,027

UNIVERSITY OF VERMONT

WINDHAM COLLEGE (U003775 002); \$5,859

VIRGIN ISLANDS

COLLEGE OF THE VIRGIN ISLANDS (U003831 002); \$10,880

VIRGINIA

COLLEGE OF WILLIAM AND MARY

(U003776 002); \$20,327

HAMPDEN-SYDNEY COLLEGE (U001718 001); \$6,696

HAMPTON INSTITUTE (U00,524 001); \$10,316

HOLLINS COLLEGE (U003779 008); \$8,917

MADISON COLLEGE (U003780 001); \$1,674

MARY BALDWIN COLLEGE (U001117): \$1.674

NORFOLK STATE COLLEGE

(U004043 001); \$8,578 OLD DOMINION UNIVERSITY

(Uoostat oos); \$17,129 RADFORD COLLEGE

(*U004088 001*); \$837

ROANOKE COLLEGE (Uoostas oos): \$8,936

UNIVERSITY OF RICHMOND (U001018 001); \$8,408

UNIVERSITY OF VIRGINIA (U003784 002); \$51,563

VIRGINIA COMMONWEALTH UNIVERSITY (1) cost as cost: \$21.716

VIRGINIA MILITARY INSTITUTE

VIRGINIA POLYTECHNIC INSTITUTE (U004787 008); \$53,916

VIRGINIA STATE COLLEGE (U001788 001); \$9,048

WASHINGTON AND LEE UNIVERSITY (UO03788 008): 88,938

WASHINGTON

Eastern Washington State College (U004049 001); \$4,696

GRAYS HARBOR COLLEGE (U001781 001); \$3,848

PACIFIC LUTHERAN UNIVERSITY (U004794 004); \$5,859

SEATTLE COMMUNITY COLLEGE (Ucology cos): \$10,902

SEATTLE UNIVERSITY (UOG)795 009): \$4.185

UNIVERSITY OF PUGET SOUND (U001796 001); \$11,103

University of Washington (U004797 008); \$88,500

WALLA WALLA COLLEGE (U004041 001); \$1,674

WASHINGTON STATE UNIVERSITY (U004794 004); \$44,851

WESTERN WASHINGTON STATE COLLEGE (U003799 009); \$10,199

WHITWORTH COLLEGE (Uoo4148); \$1,674

WEST VINGINIA

BETHANY COLLEGE (U001149); \$7,533

MARSHALL UNIVERSITY (U003803 001); \$8,841

WEST VIRGINIA INSTITUTE OF TECHNOLOGY (Uooseos oos): \$19,106

WEST VIRGINIA UNIVERSITY (Unoseo cos); \$45,788

WHEELING COLLEGE (Uoosao7 oos); \$5,859

WISCONSIN

BELOIT COLLEGE (U004150); \$5,389

CARTHAGE COLLEGE (U004151); \$1,674

HOLY FAMILY COLLEGE (U004158): \$1,674

LAWRENCE UNIVERSITY

(U003811 001); \$8,618 MARQUETTE UNIVERSITY

(Uoossis oos); \$15,171
MEDICAL COLLEGE OF WISCONSIN

(U004155); \$6,992

UNIVERSITY OF WISCONSIN BYSTEM OFFICE (Uoossis cos); \$1,874

UNIVERSITY OF WI3CONSIN, GREEN BAY (Uoo4o44 oot); \$1,674



UNIVERSITY OF WISCONSIN, MADISON (U003417 004); \$93,672

University of Wisconsin, Milwaukee (Uoosese 608); \$14,886

UNIVERSITY OF WISCONSIN, PARKSIDE (U004/54); \$8,821

VITERBO COLLEGE 1 (U004188); \$1,674

WISCONSIN STATE UNIVERSITY, OSHKOSH (U00Jago 00g): \$5,022

WISCONSIN SYATE UNIVERSITY, PLATTEVILLE (University on); \$1,674

WISCONBIN STATE UNIVERSITY, STEVENS POINT (U-003883 004), \$8,427

#### WYOMING

UNIVERSITY OF WYOMING (U003887 008); \$36,219

## UNIVERSITY SCIENCE DEVELOPMENT PROGRAM

#### **FLORIDA**

PLORIDA STATE UNIVERSITY

MARSHALL, J STANLEY; USD SUPPLEMENTARY PROPOSAL-FLORIDA STATE UNIVERSITY (Ucosess cos); 24 Months \$1,200,000

#### INDIANA

INDIANA UNIVERSITY, BLOOMINGTON

RYAN, JOHN W; USD SUPPLEMENTARY PROPOSAL-INDIANA UNIVERSITY, BLOOMINGTON (U002003 004); 24 MONTHS \$1,470,000

HANSEN, ARTHUR C: USD SUPPLEMENTARY PROPOSAL-PURDUE UNIVERSITY (UCUISSO OCT): 24 MONTHS \$300,000

#### MICHIGAN

MICHIGAN STATE UNIVERSITY

WHARTON, CLIFTON R; USD SUPPLEMENTARY PROPOSAL-MICHIGAN STATE UNIVERSITY (U003611 002); 24 MONTHS \$1,180,000

## **NEW YORK**

NEW YORK UNIVERSITY

HESTER, JAMES M; USD SUPPLEMENTARY PROPOSAL-NEW YORK UNIVERSITY (U003188 002): 24 MONTHS \$1,600,000

## **NORTH CAROUNA**

DUKE UNIVERSITY

SANFORD, TERRY; USD SUPPLEMENTARY PROPOSAL-DUKE UNIVERSITY (U003018 001): 24 MONTHS \$650,000

## PENNSYLVANIA

CARNEGIE-MELLON UNIVERSITY

SCHATZ, EDWARD R; USD SUPPLEMENTARY PROPOSAL-CARNEGIE-MELLON UNIVERSITY (U004054 col); 22 MONTHS \$450,000

UNIVERSITY OF PITTSBURGH

POSVAR, WESLEY W; USD SUPPLEMENTARY PROPOSAL-UNIVERSITY OF PITTSBURGH (U001181 001); 15 MONTHS \$800,000

## TENNESSEE

**VANDERBILT UNIVERSITY** 

HEARD, ALEXANDER; USD SUPPLEMENTARY PROPOSAL-VAN-DERBILT UNIVERSITY (U001037 001): 24 MONTHS \$1,350,000

## VIEGINIA

APPLIED DATA RESEARCH INC-PRINCETON-APPLIED DATA RESEARCH - WASHINGTON

HOLMBURG, DALE; REPORTING SYSTEM ON THE FINANCIAL AND PERSONNEL STATUS OF NSF INSTITUTIONAL GRANTEES (C484004); 2 MONTHS 43,475

## COMPUTING ACTIVITIES

COMPUTER SCIENCE AND ENGINEERING

#### ARIZONA

VAN NORTON, BOGER; OTHER PROGRAM AWARDS (01AWDS\*); 12 MONTHS \$38,200

#### CAUPORNIA

CLAREMONT COLLEGES SYSTEM OFFICE

MCCORMICK, STEPHEN F: A NUMERICAL INVESTIGATION OF ITERA-TIVE METHODS FOR THE SOLUTION OF THE LINEAR SIGENVALUE FROBLEM (JOS1737); 24 MONTHS \$31,300

STANFORD RESEARCH INSTITUTE

KAUTZ, W H; SURVEY OF SOVIET SWITCHING AND AUTOMATA THEORY (JOJIES); 12 MONTHS \$35,000

GREEN, M W; A SYSTEM CONCEPT FOR THE PRODUCTION OF RUGGED COMPUTER PROGRAMS (JOSEPH): 24 MONTHS \$196,000

#### STANFORD UNIVERSITY

FELDMAN, JEROME A; GRAMMATICAL COMPLEXITY AND INFERENCE (J000774); 24 MONTHS \$121,000

HERRIOT, JOHN G, AND FORSYTHE, GEORGE E; NUMERICAL ANALY-CIC (JOSSISS XON: 12 MONTHS \$57,500

FORSYTHE, GEORGE E, AND HERRIOT, JOHN G: NUMERICAL ANALYSIS (JO29988 XOI): 12 MONTHS \$66,600

DANTZIO, GEORGE B; MATHEMATICAL PROGRAMMING LANGUAGE (JOSO 100 X00); 12 MONTHS \$40,800

HILLIER, FREDERICK S; ALGORITHMS FOR INTEGER LINEAR AND NONLINEAR PROGRAMMING (JOSISSI); 24 MONTHS 451,700

FLOYD. ROBERT W: MINIMAL ALGORITHMS, PROGRAMMING LANGUAGES, AND INTERACTIVE PROGRAMMING (JOSJ170 X00); 12 MONTHS \$78,500

#### UNIVERSITY OF CALIFORNIA, BERKELEY

HABRISON, MICHAEL A, AND KARP, RICHARD M; THEORY OF COM-PUTATION (JOSSIFI 001); 24 MONTHS \$152,000

HARRISON, MICHAEL A, AND KARP, RICHARD M; THEORY OF COM-PUTATION (J000474 003); \$2,000

MAURER, W D: STUDENT ORIENTED RESEARCH IN PROGRAM VERIFICATION (JOSIES); 24 MONTHS \$150,000

FERRARI, D. AND GILL, A: THEORY OF DATA STRUCTURES (JOSITSA); 24 MONTHS \$49,100

GRAHAM, MARTIN; COMPUTER SYSTEMS RESEARCH (JOSI772); 18 MONTHS \$61,300

MORRIS, JAMES H JR: PROGRAMMING LANGUAGES (JOSES X00); 12 MONTHS \$72,400

UNIVERSITY OF CALIFORNIA, LOS ANGELES

ESTRIN, GERALD, MODELING AND MEASUREMENT OF COMPUTER SYSTEMS (JO00809 001); 18 MONTHS \$184.500

AVIZIENIS, ALGIRDAS; FAULT-TOLERANT COMPUTING (JOSJOOT X00); 12 MONTHS \$113,900

UNIVERSITY OF CALIFORNIA, RIVERSIDE

CHALMERS, B L: REGIONAL CONFERENCE IN APPROXIMATION THEORY (JOSJETO); 12 MONTHS \$8,500

UNIVERSITY OF CALIFORNIA, SAN DIEGO

SAVITCH, WALTER J; ANALYSIS OF NONDETERMINISTRIC AL-GORITHMS (1027118 001): 18 MONTHS \$23,100

BURKHARD, WALTER A; SOME FILE STRUCTURING AND SEARCHING PROBLEMS (JOS 1835); 18 MONTHS \$16,000

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

PRESSER, LEON, AND WOOD, ROGER C; ON-LINE TRANSLATOR WRITING SYSTEM (JOSEPS): 24 MONTHS \$75,600

## COLORADO

UNIVERSITY OF COLORADO

WAITE, WILLIAM M; PORTABLE PROGRAMMING SYSTEMS (JOJE471); 24 MONTHS \$97,600

#### CONNECTICUT

UNIVERSITY OF CONNECTICUT

SHOLL, HOWARD A; MICROPROGRAMMED MEMORY APPLICATION TO LANGUAGE PROCESSING TASKS (JOSESO), 24 MONTHS \$64,800

#### HAWAN

UNIVERSITY OF HAWAII

PAGER, DAVID, AND PETERSON, W WESLEY; A THEORETICAL AND PRACTICAL STUDY OF PROGRAMMING EFFICIENCY (JO00394 001); 24 MONTHS \$145,100

WATANABE, M S; WORKSHOP ON POSSIBILITIES AND LIMITATIONS OF ARTIFICIAL INTELLIGENCE (JO22020), 12 MONTHS \$2,550

## **ILLINOIS**

NORTHWESTERN UNIVERSITY

HENSCHEN, LAWRENCE J; RESEARCH INITIATION - HIGHER-ORDER THEOREM-PROVING USING N-SORTED LOGIC (JO32717); 18 MONTHS \$16,000

UNIVERSITY OF CHICAGO

DALEY, ROBERT P, AND GOLDSTINE, JONATHAN; RESEARCH IN LANGUAGES AND COMPLEXITY (JOSIESS); 24 MONTHS \$60,100



ASHENHURST, ROBERT L; DEVELOPMENT OF A MINICOMPUTER INTERFACING SUPPORT SYSTEM (JOSSOS: XOO\*); 12 MONTHS \$219,800

UNIVERSITY OF ILLINOIS AT URBANA

PHILLIPS, J R; COMPUTER LANGUAGES FOR MATHEMATICS AND NUMERICAL ANALYSIS (JO00388 001); 24 MONTHS 864,200

MUROGA, SABURO; LOGIC NETWORK DESIGN BY INTEGER PRO-GRAMMING (Jososos 901); 24 MONTHS \$65,900

NIEVERGELT, JURG, AND REINGOLD, EDWARD M; COMPUTATIONAL ASPECTS OF COMBINATORIAL ALGORITHMS (JOJIES): 24 MONTHS

BITZER, D. L., JOHNSON, R. L., AND CHIEN, R. T.; PLASMA DISPLAY TECHNIQUE APPLICATIONS (JG11765); 24 MONTHS \$124,500

#### INDIANA

INDIANA UNIVERSITY, BLOOMINGTON

PROSSER, FRANKLIN; REGIONAL CONFERENCE IN COMPUTER SCIENCE (JOSS41); 12 MONTHS \$10,000

PURDUE UNIVERSITY

BAYER, RUDOLF, HALSTEAD, MAURICE, NUNAMAKER, JAY, SCHNEIDER, VICTOR, AND SHEN, VINCENT; INVERSE COMPILATION STUDIES (JOJIS78): 24 MONTHS \$217,200

#### **KWO**

IOWA STATE UNIVERSITY OF SCIENCE & TECHNOLOGY

STEWART, ROBERT M, AND ZINGG, ROY J; TIME-SHARED COMPUTER SYSTEMS RESEARCH (JOJS097 X00); 12 MONTHS \$142,400

UNIVERSITY OF IOWA

MUKHOPADHYAY, AMAR; CELLULAR LOGIC ARRAYS, MACHINES AND COMPUTATIONS (Josofs) 24 MONTHS \$89,300

ALTON, DONALD A; DIVERSITY OF SPEED-UPS AND OPTIMAL PROGRAMS IN COMPUTATIONAL COMPLEXITY (JOSSIGS); 24 MONTHS \$11,800

#### MARYLAND

UNIVERSITY OF MARYLAND, COLLEGE PARK

MINKER, JACK; MECHANISMS FOR AUTOMATICALLY PERFORMING INFERENCE (Jos1454); 24 MONTHS 373,300

DEUTSCH, EDWARD S, AND ROSENFELD; PICTURE DESCRIPTION (JOSESS X00); 12 MONTHS \$116,700

CHU, YAOHAN; LANGUAGE-DIRECTED COMPUTER SYSTEM: (JOSSO15): 24 MONTHS \$155,900

## MASSACHUSETTS

BRANDEIS UNIVERSITY

BUCHSBAUM, DAVID A; COMPUTER APPLICATIONS IN ALGEBRA AND TOPOLOGY (POSISOS<sup>9</sup>); 12 MONTHS \$9,900

HARVARD UNIVERSITY

LEWIS, FORBES D: ABSTRACT COMPUTATIONAL COMPLEXITY (JOS0078); 15 MONTHS \$15,000

BOOK, RONALD V; RESEARCH ON THEORY OF COMPUTING-FORMAL LANGUAGE THEORY (JOSOSOS); 20 MONTHS \$32,300

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

FREDKIN, EDWARD; FUNDAMENTAL RESEARCH IN COMPUTER SCIENCE (JOSSET); 24 MONTHS \$850,000

UNIVERSITY OF MASSACHUSETTS, AMHERST

FOSTER, CANTON C; MACHINE LANGUAGE UTILIZATION AND GP-TIMIZATION (1931011); 24 MONTHS \$50,300

EHRICH, ROGER W; CONTEXTUAL RECOGNITION OF HANDWRITTEN WORDS (JOSIETS): 24 MONTHS \$29,600

## MICHIGAN

UNIVERSITY OF MICHIGAN

BURKS, ARTHUR W. AND HOLLAND, JOHN H; FORMAL MODELING AND SIMULATION OF NATURAL SYSTEMS (JO29989 X00); 12 MONTHS \$130,000

REITMAN, WALTER; NATURAL LANGUAGE COMMUNICATION IN A PERSONAL INFORMATION RETRIEVAL SYSTEM (JOSISSE X00); 12 MONTHS \$43,500

## MINNESOTA

UNIVERSITY OF MINNESOTA

KAIN, R Y; COMPUTER MEMORY SPACE MANAGEMENT (JOSESOS); 24 MONTHS \$69,000

UNIVERSITY OF MINNESOTA-INSTITUTE OF TECHNOLOGY

ROSEN, J B; INTERACTIVE GRAPHICAL METHODS FOR GENERAL-12ED APPROXIMATION AND OPTIMIZATION PROBLEMS (JOSESSE); 24 MONTHS \$152,000

## MISSOURI

UNIVERSITY OF MISSOURI, ROLLA

STIGALL, PAUL D; DYNAMIC MICROPROGRAMMING- A WORKABLE MODEL AND SOFTWARE IMPLICATIONS (J632598); 24 MONTHS \$49,900

WASHINGTON UNIVERSITY

STRAUSS, JON C, AND FRANKLIN, MARK A; COMPUTER SYSTEM PER-FORMANCE EVALUATION (JO35164 X00); 12 MONTHS \$91,700

ZWART, PHILIP B; DATA FITTING WITH PIECEWISE POLYNOMIAL SURFACES (JOSINIA); 24 NONTHS \$86.100

#### NEW JERSEY

AMERICAN FEDERATION OF INFO PROCESSING SOC

GILCHRIST, BRUCE; SUPPORT OF TRAVEL BY US. PARTICIPANTS IN THE US. JAPAN COMPUTER CONFERENCE TO BE HELD IN TOKYO, JAPAN, OCTOBER 1972 (JOSSIER); 12 MONTHS \$24,100

PRINCETON UNIVERSITY

DENNING, PETER 3, AND KELLER, ROBERT M; MODELS FOR PRO-GRAM BEHAVIOR AND STRUCTURE (JOSO189): 24 MONTHS \$102,700

#### **NEW MEXICO**

LOS ALAMOS SCIENTIFIC LABORATORY

MORRIS, J. B., AND WELLS, M. B.; MACHINE INDEPENDENT DOCUMENTATION OF AN ADVANCED LANGUAGE (AGO0383): 24 MONTHS \$93,800

#### **NEW YORK**

ASSOCIATION FOR COMPUTING MACHINERY

RECHARD, OTTIS W; COMPUTER SCIENCE COURSE AND CURRICU-LUM DEVELOPMENT AT FOUR YEAR COLLEGES (JOS1171 001); \$6,000

COLUMBIA UNIVERSITY

EILENBERG, SAMUEL; AUTOMATA, LANGUAGES, MACHINES, AND COMPLEXITY (JOS4738); 24 MONTHS \$118,500

CORNELL UNIVERSITY

CONSTABLE, ROBERT L; COMPUTATIONAL COMPLEXITY AND THE THEORY OF PROGRAMMING LANGUAGES (1900578 001); 24 MONTHS \$79,300

HOROWITZ, ELLIS; INVESTIGATIONS OF SOME ARITHMETIC AND ALGEBRAIC ALGORITHMS (JOSSIES); 24 MONTHS \$17,500

HARTMANIS, JURIS; AUTOMATA AND COMPUTATIONAL COMPLEXITY (JOSSITE X00); 12 MONTHS \$54,700

**NEW YORK UNIVERSITY** 

GOLDSTEIN, MAX; DEVELOPMENT OF A RESEARCH PROGRAM IN COMPUTER SCIENCES (JODISON XOI); 12 MONTHS \$226,000

ABRAHAMS, PAUL W. PARTICIPATION IN THE COMPOSITE LANGUAGE DEVELOPMENT GROUP (JOSISS); 24 MONTHS \$3,900

DAVIS, MARTIN; COMPUTATION AND LOGICAL PROOF PROCEDURE (JOJISTS X50); 18 MONTHS \$53,900

STATE UNIVERSITY AT BUFFALO

FINDLER, NICHOLAS V; ASSOCIATIVE MEMORY, PARALLEL PROCESSING LANGUAGE, AMPPL-II (JO00638 001); 24 MONTHS \$150,500 RALSTON, ANTHONY; RESEARCH IN APPROXIMATION THEORY (J039397); 12 MONTHS \$24,800

STATE UNIVERSITY AT STONY BROOK

SMITH. DAVID B; AUTOMATED LOGIC SPECIFICATION AND DESIGN USING A BEHAVIORAL LANGUAGE DERIVED FROM REGULAR EXPRESSIONS (JOSISSE); 24 MONTHS \$44,100

## NORTH CAROLINA

NORTH CAROLINA STATE UNIVERSITY AT RALEIGH

STAUDHAMMER, JOHN; COLOR COMPUTER GRAPHICS (JOJ1816); 36 MONTHS \$204,900

UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

BROOKS, FREDERICK P JR; RESEARCH ON COMPUTER DISPLAYS . VISUAL AND RINESTHETIC (JOJ667); 36 MONTHS \$325,000

## **NORTH DAKOTA**

TARESKI, VAL G: OTHER PROGRAM AWARDS (GIAWDS); 16 MONTHS 833.150

## OHIO

OHIO STATE UNIVERSITY

CSURI, CHARLES A; SOFTWARE AND HARLWARE REQUIREMENTS FOR REAL-TIME FILM ANIMATION (JOODED 101); 24 MONTHS \$159,200 BIERMANN, ALAN; SELF-PROGRAMMING SYSTEMS- A NEW AP-PROACH (JOJIES XOO); 12 MONTHS \$25,400

## **PEHNSYLVANIA**

CARNEGIE-MELLON UNIVERSITY

ANDREWS, PETER B, AND LOVELAND, DONALD W; PROOF PROCEDURES IN PREDICATE CALCULUS AND TYPE THEORY (JOSEIST X01); 12 MONTHS \$42,800 PARNAS, D L; A TOOL FOR CONTROLLING THE COMPLEXITY OF

SOFTWARE SYSTEMS (JOSO187): 12 MONTHS \$20,500

TRAUB, J F. ITERATION ALGORITHMS. THEORY AND APPLICATIONS (JOSEIII); 12 MONTHS \$27,000



PARNAS, D L; SYSTEM FAMILY CONCEPT (JOSESS): 24 MONTHS \$73,000 SIEWIOREK, DAN; REGISTER TRANSFER LEVEL COMPUTER SYSTEMS DESIGN (JOSESS XOO): 12 MONTHS \$65,900

## SOCIETY FOR INDUSTRIAL AND APPLIED MATHEMATICS

VARGA, RICHARD S; FIFTH SYMPOSIUM ON NUMERICAL ALGEBRA
(PAISSAT): 12 MONTHS \$18 100

## UNIVERSITY OF PENNSYLVANIA

KRIPPENDORFF, KLAUS; COMPUTER PROGRAMS FOR MUL-TIVARIATE CLASSIFICATION IN CONTENT ANALYSIS (JOJOSSO); 24 MONTHS \$54,900

RUBINOFF, MORRIS; INTERACTIVE GRAPHICS FOR SOLID OBJECTS (JON 141): 24 MONTHS \$65,000

## UNIVERSITY OF PITTSBURGH

HALL, CHARLES A: REGIONAL CONFERENCE ON THE NUMERICAL SOLUTION OF NONLINEAR ALGEBRAIC SYSTEMS (JOSSES): 12 MONTHS \$11.700

## RHODE ISLAND

## BROWN UNIVERSITY

VAN DAM, ANDRIES; COMPUTER GRAPHICS AND ITS APPLICATIONS (Jotsio: X01); 12 MONTHS \$99,600

FREIBERGER, WALTER F, AND GRENANDER, ULF: PATTERN ANALYSIS AND RECOGNITION (JOSIOGY X00); 12 MONTHS \$86,100

SAVAGE, JOHN E; THE PERFORMANCE OF COMPUTING SYSTEMS AND COMPILER ANALYSIS (JOSTETO); 24 MONTHS \$57,700

#### TENNESSEE

## VANDERBILT UNIVERSITY

WAGNER, ROBERT A; FORMAL LANGUAGE ERROR CORRECTORS (JOJ3014); 24 MONTHS \$38,800

#### TEXAS

## RICE UNIVERSITY

JUMP, J ROBERT; A STUDY OF PROGRAMMABLE CELLULAR ARRAY MODELS AND APPLICATIONS (JOSSTSO 001): 24 MONTHS \$37,000

MINNICK, ROBERT C; DATA PRE-PROCESSING IN INTERACTIVE COMPUTER SYSTEMS (JOSTOS); 24 MONTHS \$110,400

KENNEDY, KENNETH W; ADVANCED PROGRAMMING LANGUAGE DESIGN ON A TAGGED COMPUTER (JOSEPST), 36 MONTHS \$117,000

## UNIV OF TEXAS AT AUSTIN

PRATT, TERRENCE W; A FORMAL THEORY OF PROGRAMMING LAN-GUAGE DEFINITION (Josoffs 601); 24 MONTHS \$34,200

YEH, RAYMOND T; STUDIES ON MATHEMATICAL FOUNDATIONS OF SOFT ALGEBRA (JOJISTA): 24 MONTHS \$31,600

BLEDSOE, WOODROW W; RESEARCH IN AUTOMATIC THEOREM PROVING (1032269); 24 MONTHS \$83,800

WELCH, TERRY A; RESEARCH INITIATION - ANALYSIS OF COM-PUTER FILE SEARCH TECHNIQUES (JOSEPH); 18 MONTHS \$16,000

SIKLOSSY, LAURENT: EXPLORATIONS IN PROBLEM SOLVING, THEOREM PROVING, THEOREM DISCOVERY AND ROBOT GUIDANCE (JOS4736): 24 MONTHS \$39,300

AGGARWAL, J K; REAL-TIME VISUAL RECOGNITION BY DIGITAL COMPUTER (Kosesses X00°); 12 MONTHS \$12,500

## UTAH

## UNIVERSITY OF UTAH

HEARN, ANTHONY C; COMPUTER SOLUTION OF SYMBOLIC PROBLEMS IN THEORETICAL PHYSICS (JOSSIBS); 24 MONTHS \$155,800

## **YIRGINIA**

## UNIVERSITY OF VIRGINIA

PFALTZ, JOHN L; THE USE OF GRAPH STRUCTURES TO REPRESENT COMPUTER INFORMATION (JOSIESE); 24 MONTHS \$59,800

## VIRGINIA POLYTECHNIC INSTITUTE

GRAY, FESTUS G; RESEARCH INITIATION THEORETICAL IN-VESTIGATION OF DIAGNOSABLE LOGIC SYSTEMS (IGI2118); 18 MONTHS \$15,700

## WASHINGTON

## UNIVERSITY OF WASHINGTON

RITCHIE, ROBERT W, AND LADNER, RICHARD; COMPUTATIONAL COMPLEXITY AND DEGREES OF DIFFICULTY (JOSI745 X00); 12 MONTHS \$28,700

## WASHINGTON BTATE UNIVERSITY

BENSON, DAVID B; FORMAL SYNTAX, FORMAL SEMANTICS AND NATURAL LANGUAGE COMPILERS (1001171 001); 24 MONTHS \$61,700

PHILLIPS, JAMES L: NUMERICAL SOLUTION OF LINEAR INTEGRAL EQUATIONS (JOSIES), 24 MONTHS \$30,100

#### WISCONSIN

## UNIVERSITY OF WISCONSIN, MADISON

HALTON, JOHN H: STUDIES IN THE THEORY AND TECHNIQUES OF THE MONTE CARLO METHOD U019998 X00), 12 MONTHS \$48,000

COLLINS, GEORGE E, AND CAVINESS, B F; SYMBOLIC AND ALGEBRA-IC CALCULATION (JOSO125 XOO); 12 MONTHS \$71,500

LANDWEBER, LAWRENCE H; FINITE-AUTOMATA AND PREDICATE CALCULUS BASED FORMAL LANGUAGES (USIGST): 24 MONTHS \$43,200 CRYER, C W; THE NUMERICAL ANALYSIS OF UNKNOWN BOUNDARY PROBLEMS (UG19096): 12 MONTHS \$14,400

## COMPUTER APPLICATIONS IN RESEARCH

#### ARIZONA

VAN NORTON, ROGER; OTHER PROGRAM AWARDS (01AWDS\*); 12 MONTHS \$1,900

#### CALIFORNIA

MORGAN, M GRANGER; OTHER PROGRAM AWARDS (GIAWDS); 24 MONTHS \$56,500

## CALIFORNIA INSTITUTE OF TECHNOLOGY

THOMPSON, FREDERICK B; THE IMPLEMENTATION OF AN AD-VANCED COMPUTER SYSTEM FOR SOCIAL SCIENCE RESEARCH (Jos1573'); 9 MONTHS \$25,000

#### LAWRENCE RADIATION LABORATORY

FERNBACH, S; SEMINAR ON FUTURE OF COMPUTING (AGOOSES); 12 MONTHS \$13,000

#### RAND CORPORATION

BOEHM, BARRY W: STUDIES IN THE PSYCHOLOGY OF MAN-COM-PUTER PROBLEM-SOLVING (JOSETSE), 24 MONTHS \$147,100

## UNIVERSITY OF CALIFORNIA, BERKELEY

SANGREN, WARD C; IMPACT OF NETWORKING ON UNIVERSITY COMPUTING (JOSSICE); 11 MONTHS \$38,300

KAISER, HENRY F; COMPUTER SOFTWARE FOR FACTOR ANALYSIS (JOJ 1746); 36 MONTHS \$74,400

APPLEYARD, DONALD, AND CRAIK, KENNETH; ENVIRONMENTAL DISPOSITIONS AND THE SIMULATION OF ENVIRONMENTS (SOJO984 X00°), 12 MONTHS \$73,280

BALDERSTON, F E; OPERATION OF A MANAGEMENT SCIENCE RESEARCH FACILITY (SOJEISE'): 12 MONTHS \$50,000

## UNIVERSITY OF CALIFORNIA, LOS ANGELES

VIDAL, J J; BRAIN COMPUTER INTERFACE (JOSE221); 12 MONTHS \$68,900

## UNIVERSITY OF CALIFORNIA, SAN DIEGO

NORMAN, DONALD A; COMPUTER SIMULATION OF HUMAN SEMANTIC MEMORY AND COGNITION (BOSESS X00°); 12 MONTHS \$50,000

## UNIVERSITY OF SOUTHERN CALIFORNIA

KAPRIELIAN, ZOHRAB A, CHRISTY, ROBERT F, AND SAXON, DAVID S; FEASIBILITY STUDY OF COMPUTER RESOURCES SHARING -CALTECH, UCLA, USC (JO32246); 18 MONTHS \$144,200

UNIVERSITY OF CALIFORNIA, LOS ANGELES-SCHOOL OF MEDICINE

DIXON, W J; A CONFERENCE ON STATISTICAL COMPUTING TO BE HELD IN LOS ANGELES, CALIFORNIA, SEPTEMBER 1971 (J02881,1 001); 21 MONTHS \$22,400

## COLORADO

## UNIVERSITY OF COLORADO

FOSDICK, LLOYD D: COLLABORATIVE RESEARCH IN PLANNING AN APPROACH TO TESTING AND DISSEMINATION OF COMPUTER PROGRAMS FOR RESEARCH AND DEVELOPMENT (JOSIGSI); 12 MONTHS \$26,500

FOSDICK, LLOYD D; MEETING ON VALIDATION AND DISTRIBUTION OF COMPUTER SOFTWARE (JOS2760); 6 MONTHS \$8,400

SCHIFFMAN, ROBERT L; COLLABORATIVE RESEARCH- COMPUTER BASED TECHNOLOGY TRANSFER IN CIVIL ENGINEERING (K032971 X00°); 12 MONTHS \$73,600

## UNIVERSITY OF DENVER-DENVER RESEARCH INSTITUTE

DORN, WILLIAM S, AND ROBBINS, MARTIN D; ALTERNATIVE AP-PROACHES TO THE MANAGEMENT AND FINANCING OF UNIVERSITY COMPUTING CENTERS (JOSESSE); 12 MONTHS \$168,400

## DISTRICT OF COLUMBIA

## PUBLIC TECHNOLOGY INC

HAVLICK, J ROBERT: TO DESIGN A LOCAL GOVERNMENT SOFTWARE CLEARINGHOUSE (JOSISSE®), 10 MONTHS \$72,300



NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL

PAUL, MARTIN A; TASK ORDER FOR A STUDY OF A NATIONAL LABORATORY FOR THEORETICAL CHEMISTRY (CS10981\*); 12 MONTHS \$25,000

#### ILUNOIS

ARGONNE NATIONAL LABORATORY

COWELL, WAYNE R; PLANNING AN APPROACH TO TESTING AND DISSEMINATION OF COMPUTER PROGRAMS FOR RESEARCH AND DEVELOPMENT (AGOOSES): 12 MONTHS \$13,500

UNIVERSITY OF CHICAGO

ASHENHURST, ROBERT L; DEVELOPMENT OF A MINICOMPUTER IN-TERFACING SUPPORT SYSTEM (JOSSOS), 12 MONTHS \$237,600

#### INDIANA

PURDUE UNIVERSITY

HARRINGTON, RODNEY B, AND GIESE, RONALD L; RESEARCH COM-PUTER TECHNIQUES IN COMPLEX LABORATORY ENVIRONMENTS (JOSELSS XOI); 12 MONTHS \$151,600

ROSEN, SAUL; SOFTWARE FOR STATISTICAL ANALYSIS (JOSO269); 24 MONTHS \$155,000

#### KANSAS

UNIVERSITY OF KANSAS

TEMPLETON, ARCH, KELLY, GERRY L, ROBINSON, RALPH, AND RILEY, RICHARD; A MEDICAL IMAGE PROCESSING, ENHANCEMENT, AND DISPLAY SYSTEM (JOSS 178 001); \$1,600

GILLES, PAUL W, AND CULVAHOUSE, JACK W; COMPUTER-ASSISTED AND CONTROLLED EXPERIMENTS IN CHEMICAL PHYSICS (JOSELIS), 24 MONTHS \$413,700

#### MARYLAND

PEDERATION OF AMER SOCIETIES FOR EXPER BIOLOGY

GRANT, ROBERT H; CONFERENCE ON THE COMPUTER AS A RESEARCH TOOL IN THE LIFE SCIENCES (JOSSOSS); 24 MONTKS \$40,000 NATIONAL BUREAU OF STANDARDS

DAVIS, RUTH M; DEVELOPMENT OF PLANS FOR A NATIONAL SCIENCE NETWORK (AGOOJSO): 6 MONTHS \$111,900

#### MASSACHUSETTS

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

GROISSER, LEON B, AND NEGROPONTE, NICHOLAS; COMPUTER AIDS TO PARTICIPATORY ARCHITECTURE (J630114); 24 MONTHS \$60,500

## MISSOURI

ST LOUIS UNIVERSITY

TEPAS, DONALD I; CONFERENCE ON THE USE OF ON-LINE COMPU-TERS IN PSYCHOLOGY (JOI0857); 12 MONTHS \$12,500

## NEW JERSEY

PRINCETON UNIVERSITY

DAWSON, JOHN M; COMPUTER PLASMA PHYSICS WITH POSSIBLE EXTENSIONS (JOJIORS X00): 12 MONTHS \$40,000

RUTGERS UNIVERSITY

GORENSTEIN, DANIEL; FINITE GROUP THEORY (POSSSIS X00°); 12 MONTHS \$11,700

STEVENS INSTITUTE OF TECHNOLOGY

ROSEN, BERNARD; AUTOMATION OF ANALYTICAL CALCULATIONS IN PHYSICS (JOSESSO); 12 MONTHS \$20,000

## **NEW YORK**

ASSOCIATION FOR COMPUTING MACHINERY

ADAMS, JAMES M; FOUR WORKSHOPS ON MAJOR TECHNICAL ISSUES FACING THE COMPUTING PROFESSION (1931470): 12 MONTHS \$20,000

**BROOKHAYEN LABORATORY** 

HAMILTON, WALTER C; COLLABORATIVE PROJECT IN THE DEVELOPMENT OF A CRYSTALLOGRAPHIC COMPUTING NETWORK WITH THRE-DIMENSIONAL DISPLAY CAPABILITY (AGOOSTO): 12 MONTHS \$274,000

COLUMBIA UNIVERSITY

PRENDERGAST, KEVIN H; DYNAMICS OF GALAXIES (P027765 001°); 12 MONTHS \$10,000

CORNELL UNIVERSITY

SEARLE, SHAYLE R; VARIANCE COMPONENT ESTIMATION (JG51746); 24 MONTHS \$89,500

**HUNTER COLLEGE** 

BEVERIDGE, DAVID L; REMOTE TERMINAL COMPUTER GRAPHICS (JOSEPHE), 24 MONTHS \$33,600

INSTITUTE OF ELECTRICAL & ELECTRONIC ENGRS INC.

FINK, DONALD G: 1979 INTERNATIONAL CONFERENCE ON COM-PUTER COMMUNICATIONS (JOSSES); 12 MONTHS \$51,100

**QUBBNS COLLEGE** 

BESHERS, JAMES; A UNIVERSITY BASED URBAN INFORMATION EF. FORT FOR NEW YORK CITY (JOSSESS), 12 MONTHS \$54,800

UNIVERSITY OF ROCHESTER

IXER, HOWARD P; THE RECOGNITION AND ANALYSIS OF CONTENT BY COMPUTER (SOMERIE'); 24 MONTHS \$10,000

#### **HORTH CAROLINA**

UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

HETZEL, WILLIAM C; MAN MACHINE SYSTEM FOR TEST DATA GENERATION (JOSO 40); 24 MONTHS \$86,700

#### OREGON

UNIVERSITY OF OREGON - EUGENE

HIGGINS, RICHARD J; COMPUTER ASSISTED EXPERIMENTATION IN SOLID STATE PHYSICS (1998786); 12 MONTHS \$56,700

#### PENNSYLVANIA

CARNEGIE-MELLON UNIVERSITY

EASTMAN, CHARLES M; AUTOMATED SPACE PLANNING (JOSIISS); 24 MONTHS \$60,000

REDDY, D R; COMPUTER MODELS OF NEURAL NETWORKS (JOSETSA); 24 MONTHS 4176,200

FENVES, STEVEN J; COLLABORATIVE RESEARCH- COMPUTER BASED TECHNOLOGY TRANSFER IN CIVIL ENGINEERING (KOSESTO X00°); 12 MONTHS \$34,400

#### **RHODE ISLAND**

BROWN UNIVERSITY

WEINER, JEROME H; NUMERICAL SOLUTION OF THE TIME-DEPEN-DENT SCHRODINGER EQUATION (JOSOIOS); 12 MONTHS \$55,000

## TENNESSEE

UNIVERSITY OF TENNESSEE, KNOXVILLE-SPACE INSTITUTE
HELVEY, T CHARLES; COMPUTER APPLICATIONS IN BIOMEDICAL
INSTRUMENTATION (IGS1918): 12 MONTHS \$6,400

#### TEXAS

TEXAS A & M UNIVERSITY

MEYER, EDGAR F; COLLABORATIVE PROJECT IN THE DEVELOP-MENT OF A CRYSTALLOGRAPHIC COMPUTING NETWORK WITH THREE-DIMENSIONAL DISPLAY CAPABILITY (JOSJEW X00); 12 MONTHS \$111,100

## UTAH

UNIVERSITY OF UTAH

HARRIS, FRANK E; COMPUTER SOFTWARE DEVELOPMENT FOR THEORETICAL CHEMISTRY (JOSSOIS); 24 MONTHS \$196,500

## WISCONSIN

UNIVERSITY OF WISCONSIN, MADISON

WHITLOCK, H W; ORGANIC CHEMISTRY BY COMPUTER (JOSE165); 24 MONTHS \$27,000

VENEZKY, RICHARD L; REMOTE ACCESS LEXICOGRAPHIC SYSTEM (JOS764); 24 MONTHS \$122,400

## COMPUTER INNOVATION IN EDUCATION

## CALIFORNIA

CLAREMONT COLLEGES SYSTEM OFFICE

WEINGARTEN, FRED W; A FOURTH CONFERENCE ON COMPUTERS IN THE UNDERGRADUATE CURRICULA (JOSJOSS): 18 MONTHS \$41,000

CLARBMONT GRADUATE SCHOOL

WEINGARTEN, FRED W; CLARENOUNT REGIONAL EDUCATIONAL NETWORK Ucsossis), 12 MONTHS \$34,100

STANFORD UNIVERSITY

SUPPES, PATRICK: BASIC RESEARCH IN COMPUTER-ASSISTED IN-STRUCTION (1000145 X00); 12 MONTHS \$385,000

UNIVERSITY OF CALIFORNIA, INVINE

BORK, ALFRED M; COMPUTER BASED, INTERACTIVE GRAPHICS, IN TEACHING UNDERGRADUATE PHYSICS (JOCO226 OCI); 24 MONTHS \$182,000

UNIVERSITY OF CALIFORNIA, SANTA CRUZ

HUSKEY, HARRY D. DEVELOPMENT OF A SMALL SCALE TIME-SHAR-ING SYSTEM AND GRAPHIC DISPLAY COMPLEX (JOSOMS X00), 12 MONTHS \$150,100



#### COLORADO

COLORADO STATE UNIVERSITY

HAYMAN, ROBERT W, AND LORD, WILLIAM; COMPUTER MANAGED LEARNING- ADVANCEMENT TOWARD A STABLE EDUCATIONAL TECHNOLOGY (JOSGIE); 12 MONTHS \$107,800

HAYMAN, ROBERT W, AND LORD, WILLIAM; COMPUTER MANAGED LEARNING- ADVANCEMENT TOWARD A STABLE EDUCATIONAL TECHNOLOGY (JOSOSIS 001): 12 MONTHS \$2,000

#### DISTRICT OF COLUMBIA

DISTRICT OF COLUMBIA PUBLIC SCHOOLS

RICE, WILLIAM S: A CURRICULUM DEVELOPMENT AND DEMON-STRATION PROJECT FOR ADP TRAINING IN THE ANACOSTIA PROJECT UNITY; 15 MONTHS \$129,200

DEPT. OF COMMERCE-DEPARTMENT OF COMMERCE

DAVIS, RUTH M; COMMITTEE ON AUTOMATION OPPORTUNITIES IN THE SERVICE AREAS (AGOODS!\*): 10 MONTL 3 \$50,000

#### PLORIDA

BETHUNE-COOKMAN COLLEGE

POONAL PREMSUKH; FLORIDA REGIONAL COOPERATIVE COMPUTING ACTIVITY (JOSSON); 27 MONTHS \$11,000

**#DWARD WATERS COLLEGE** 

GARRETT, LINDA; FLORIDA REGIONAL COOPERATIVE COMPUTING ACTIVITY (JOSSIGI); 21 MONTHS \$12,900

FLORIDA JUNIOR COLLEGE

DEAN, DAVID B; FLORIDA RECIONAL COOPERATIVE COMPUTING ACTIVITY (JOSSES), 27 MONTHS \$29,000

FLORIDA TECHNOLOGICAL UNIVERSITY

FALCONER, DAVID R: FLORIDA REGIONAL COOPERATIVE COMPUTING ACTIVITY (JOSSIUS): 27 MONTHS \$18,400

JACKBONVILLE UNIVERSITY

GARDINER, ASA; FLORIDA REGIONAL COOPERATIVE COMPUTING ACTIVITY (JOSSIOS); 21 MONTHS \$10,500

LAKE CITY COMMUNITY COLLEGE

ALTIERI, DONALD P: FLORIDA REGIONAL COOPERATIVE COMPUTING ACTIVITY (JOSSES): 27 MONTHS 8196,600

SANTA PR JUNIOR COLLEGE

DEARN, DAYID B; FLORIDA REGIONAL COOPERATIVE COMPUTING ACTIVITY (JOSSIOO); 27 MONTHS \$17,900

STETSON UNIVERSITY

MEDLIN, GENE W: FLORIDA REGIONAL COOPERATIVE COMPUTING ACTIVITY (JOSSIGA); 27 MONTHS \$12,200

UNIVERSITY OF NORTH FLORIDA

SIMMONS, FRED H; FLORIDA REGIONAL COOPERATIVE COMPUTING ACTIVITY (JOSSIOS): 27 MONTHS \$13,000

VALENCIA COMMUNITY COLLEGE

EDWARDS, LOUIS; FLORIDA REGIONAL COOPERATIVE COMPUTING ACTIVITY (JOSJ293); 27 MONTHS \$16,200

## GEORGIA

PAINS COLLEGE

MCCAIN, THOMAS C, EXPERIMENT IN THE DEVELOPMENT OF A RE-GIONAL COMPUTER CENTER (Jo01149 001); \$2,000

SOUTHERN REGIONAL EDUCATION BOARD

SWOYER, VINCENT H. AND HAMBLEN, JOHN W; CONTRACT FOR SURVEY AND ANALYSIS OF COMPUTING ACTIVITIES IN UNITED STATES HIGHER EDUCATION, TASK I-B-1 (C404000 002); 3 MONTHS \$8,330

HAMBLEN, HOHN W: EXPERIMENT ON MINE - COMPUTERS (JODIO78 00)); \$5,000

HAMBLEN, JOHN W; 1978 CONFERENCE ON COMPUTERS IN THE UN-DERGRADUATE CURRICULA (JOSO44); 12 MONTHS \$44,700

HAMBLEN, JOHN W: INTERNATIONAL WORKSHOP ON COMPUTER EDUCATION FOR TEACHERS IN SECONDARY EDUCATION IN CONJUNCTION WITH THE 1912 CONFERENCE ON COMPUTERS IN THE UNDERGRADUATE CURRICULA (JOSOTIE OI), 12 MONTHS \$20,000

## HAWAH

UNIVERSITY OF HAWAII

ABRAMSON, NORMAN; PACIFIC EDUCATIONAL COMPUTER NET-WORK STUDY (JOSI220\*); 24 MONTHS \$68,700

## KLINOIS

University of Illinois at Urbana

BITZER, DONALD L. DEMONSTRATION AND EVALUATION OF THE PLATO IV COMPUTER BASED EDUCATION SYSTEM (C12:000); 48 MONTHS \$1,000,000

BITZER, DONALD L; LARGE-SCALE COMPUTER-BASED EDUCATION EXPERIMENT (JOANNI 001); 6 MONTHS \$275,000

## INDIANA

PURDUR UNIVERSITY

PERONE, SAM P. INCORPORATION OF DIGITAL COMPUTER TECHNOLOGY INTO THE UNDERGRADUATE CHEMISTRY LABORATORY (J000448 021): 18 MONTHS \$86.900

#### **AWOI**

UNIVERSITY OF IOWA

BOYNTON, G R; CURRICULUM DEVELOPMENT IN THE SOCIAL SCIENCES (Joseph 12, 12 Months 196,000

WEEG, GERARD P; AN EXPERIMENT IN THE TRANSPORTABILITY OF COMPUTER-BASED CURRICULUM MATERIALS (1091736); 12 MONTHS 882 400

#### MASSACHUSETTS

**BOLT BERANEK AND NEWMAN INC** 

FEURZEIG, WALLACE; TECHNOLOGY FOR ANALYSIS OF STUDENT INTERACTIONS WITH COMPLEX PROGRAMS (C100000); 18 MONTHS \$103,686

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

PAPERT, SEYMOUR; COMPUTER-BASED CURRICULAR RESEARCH IN ELEMENTARY EDUCATION (JODIOL) 061); 24 MONTHS \$201,500

KAPLOW, ROY: A TEACHER-INTERACTIVE COMPUTER SYSTEM (TICS) (JOSGIOG XOG); 12 MONTHS \$73,500

NEW ENGLAND REGIONAL COMPUTING PROGRAM

MORSE, PHILIP M, AND ROLLA, ROBERT A; AN EXPERIMENT TO DETERMINE THE EDUCATIONAL SERVICES DEMANDED BY USERS OF A MULTI-COMPUTER NETWORK (JODIST 001); 12 MONTHS 880,000

## MICHIGAN

UNIVERSITY OF MICHIGAN

TEICHROEW, DANIEL; CURRICULUM DEVELOPMENT IN MANAGE.
MENT INFORMATION SYSTEMS EDUCATION IN COLLEGES AND
UNIVERSITIES (J005: 1 001); 16 NONTHS \$8,000

#### NEBRASKA

UNIVERSITY OF NEBRASKA AT LINCOLN

WILKINS, CHARLES L: DEVELOPMENT OF AN UNDERGRADUATE COURSE IN THE USE OF DIGITAL COMPUTERS WITH CHEMISTRY IN. STRUMENTATION (JOSO411 001); 18 MONTHS \$43,600

## **NEW KAMPSHIRE**

DARTMOUTH COLLEGE

KURTZ, THOMAS E; AN EXPERIMENT IN THE TRANSPORTABILITY OF COMPUTER-BASED CURRICULUM MATERIALS (JOS1754); 12 MONTHS \$53,300

## NEW JERSEY

EDUCATIONAL TESTING SERVICE

ANASTASIO, ERNEST J; REVIEW AND EVALUATION OF TWO CAI PRO-JECTS (C731000); 63 MONTHS \$100,000

KATZ, MARTIN R; VALIDATION OF A SYSTEM OF INTERACTIVE GUIDANCE IN A TWO-YEAR COLLEGE (JOSSES), 24 MONTHS \$100,000

## **NEW YORK**

AGRICULTURAL AND TECH COLLEGE AT ALFRED

BURNS, LAWRENCE E; NEW YORK EDUCATIONAL COMPUTER CON-SORTIUM (JOSSIA), 27 LIONTHS \$21,900

ARGICULTURAL AND TECH COLLEGE AT DELHI

BRACH, RONALD C; NEW YORK EDUCATIONAL COMPUTER CONSORTIUM (Jossiso); 27 MONTHS \$16,000

BROOME COMMUNITY COLLEGE

DOUGHERTY, EDWARD F; NEW YORK EDUCATIONAL COMPUTER CONSORTIUM (JOSSI46); 27 MONTHS \$4,900

COLLEGE AT CORTLAND

BANSE, ANDREW; NEW YORK EDUCATIONAL COMPUTER CONSORTI-UM (JO3J14); 21 MONTHS \$18,700

COLLEGE AT FREDONIA

BAYDALA, EDWARD T; NEW YORK EDUCATIONAL COMPUTER CON-SORTIUM (JOSSISS): 27 MONTHS \$26,200

COLLEGE AT GENESEO

DEUTSCH, EDNA W; NEW YORK EDUCATIONAL COMPUTER CONSORTIUM (JOMISA); 27 MONTHS \$29,100

COLLEGE AT OSWEGO

VAN DYK, OEBELE G; NEW YORK EDUCATIONAL COMPUTER CON-SORTIUM (JOSIST); 27 MONTHS \$25,500

COLLEGE AT PLATTSBURGH

SHEATS, GEORGE F; NEW YORK EDUCATIONAL COMPUTER CONSOR-TIUM (Jossiss); 27 MONTHS \$25,600



#### COLLEGE AT POTEDAM

STILLMAN, ALAN H; NEW YORK EDUCATIONAL COMPUTER CONSOR-TIUM (IGS) 1531: 27 MONTHS \$25.700

## COLUMBIA-GREENE COMMUNITY COLLEGE

POWERS, THOMAS J; NEW YORK EDUCATIONAL COMPUTER CONSORTIUM (JOSJIA); 27 MONTHS \$16,509

## COMMUNITY COLLEGE OF THE FINGER LAKES

HENDERSON, FREDERICK R; NEW YORK EDUCATIONAL COMPUTER CONSORTIUM (JOSSISI); 27 MONTHS \$22,200

## CORNING COMMUNITY COLLEGE

Frank, David C; New York Educational computer consortium (Justiu); 27 months 122,900

#### PULTON-MONTGOMERY COMMUNITY COLLEGE

COLE, ROBERT C; NEW YORK EDUCATIONAL COMPUTER CONSORTIUM (1931)33); 21 MONTHS \$20,600

#### JAMESTOWN COMMUNITY COLLEGE

PANZARELLA, MARION A; NEW YORK EDUCATIONAL COMPUTER CONSORTIUM (JOSSISS); 21 MONTHS \$22,400

## MARITIME COLLEGE

BOWMAN, RONALD C: NEW YORK EDUCATIONAL COMPUTER CON-SORTIUM (JOSSISS), 21 MONTHS \$25,000

## STATE UNIVERSITY AT BINGHAMTON

ROBERTSON, ROBERT E; NEW YORK EDUCATIONAL COMPUTER CON-SORTIUM (JOSSIA); 27 MONTHS \$349,000

#### SYRACUSE UNIVERSITY

DAVIS, ROBERT B; A STUDY OF COMPUTER-BASE ELEMENTARY PROBLEM-SOLVING SKILLS IN MATHEMATICS USING A COMPUTER PROGRAMMING LANGUAGE (LOGO) (JOSZZZZY) 12 NONTHS \$89,739

#### **NORTH CAROUNA**

## NORTH CAROLINA BOARD OF HIGHER EDUCATION

DENK, JOSEPH R; EXTENSION OF CURRICULUM DEVELOPMENT ACTIVITIES BY NCECS (JOCO726 008); 12 MONTHS \$69,700

BLUM, RONALD; AN EXPERIMENT IN THE TRANSPORTABILITY OF COMPUTER-BASED CURRICULUM MATERIALS (JOSITSE); 12 MONTHS \$110,442

PARKER, LOUIS T; AN EXPERIMENT IN THE TRANSPORTABILITY OF COMPUTER-BASED CURRICULUM MATERIALS (1091755); 12 MONTHS \$89,500

## UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

CALINGAERT, PETER, AND BROOKS, FREDERICK P JR: A PROGRAM OF EXPERIMENTAL EXPLORATIONS IN COMPUTER-ASSISTED IN-STRUCTION (Jo00735 001); 6 MONTHS \$63,400

## **OREGON**

## OREGON STATE UNIVERSITY

HUNTER, LAWRENCE C; AN EXPERIMENT IN THE TRANSPORTA-BILITY OF COMPUTER-BASED CURRICULUM MATERIALS (JGJ1757); 12 MONTHS \$83,328

## UNIVERSITY OF OREGON · EUGENE

KLOPFENSTEIN, C E; THE DEVELOPMENT OF THE USE OF SMALL DIGITAL COMPUTERS INTERFACED WITH CHEMICAL INSTRUMENTATION IN AN UNDERGRADUATE CHEMISTRY LABORATORY (J000191 001); 18 MONTHS \$42,400

## PENNSYLVANIA

## ALLENTOWN COLLEGE ST FRANCIS DE SALES

GADEK, FRANK J; PENNSYLVANIA'S REGIONAL INSTRUCTIONAL SYSTEM FOR EDUCATION (PRISE), LEHIGH VALLEY NETWORK (JOJOSIS); 14 MONTHS \$6,800

GADEK, FRANK J; PRISE (Jososis 001), \$6,800

## CARNEGIE-MELLON UNIVERSITY

NEWELL, ALLEN; COMPUTER - ASSISTED INSTRUCTION PROJECT (C109000); 2 MONTHS \$5,600

## CEDAR CREST COLLEGE

COZZOLINO, GERARD E: PENNSYLVANIA'S REGIONAL INSTRUC-TIONAL SYSTEM FOR EDUCATION (PRISE), LEHIGH VALLEY NETWORK UNIONIN, 14 MONTHS \$4,400

COZZOLINO, GERARD E; PRISE (JOSOFIE 001): \$4,400

## **BLIZABETHTOWN COLLEGE**

KEEFER, JAMES L: PENNSYLVANIA'S REGIONAL INSTRUCTIONAL SYSTEM FOR EDUCATION IPRISE, CENTRAL REGION NETWORK (JASOSOS), 28 MONTHS \$6.500

KEEFER, JAMES L; PRISE (JOSO202 001); \$6,500

## GANNON COLLEGE

PALMER. JAMES E; PENNSYLVANIA'S REGIONAL INSTRUCTIONAL SYSTEM FOR EDUCATION (PRISE), WESTERN REGION NETWORK (JOIGIO); 24 MONTHS \$10,700

PALMER, JAMES E; PRISE (JOJO209 001); \$10,700

## INTERUNIVERSITY COMMUNICATIONS COUNCIL

ANASTASIO, ERNEST J; INVESTIGATION OF FACTORS THAT INHIBIT THE WIDESPREAD USE OF COMPUTERS IN THE INSTRUCTIONAL PROCESS (JOSTUS) 001), 12 MONTHS \$12,400

#### KINGOS COLLEGE

DECESARIS, ANGELO, PENNSYLVANIAS REGIONAL INSTRUCTIONAL SYSTEM FOR EDUCATION (PRISE), CENTRAL REGION NETWORK (JOSOFOS), 25 MONTHS \$10,500

DECESARIS, ANGELO; PRISE (JOSO203 001); \$10,800

#### LAFAYETTE COLLEGE

SCHWAR, JAMES; PENNSYLVANIA'S REGIONAL INSTRUCTIONAL SYSTEM FOR EDUCATION (PRISE), LEHIGH VALLEY NETWORK (JOSOIT); 14 MONTHS \$6,600

SCHWAR, JAMES; PRISE (JOSOS17 001); \$6,600

#### LEHIGH UNIVERSITY

WALKER, JOHN E; PENNSYLVANIA'S REGIONAL INSTRUCTIONAL SYSTEM FOR EDUCATION (PRISE), LEHIGH VALLEY NETWORK (JOSGII); 14 MONTHS \$30,700

WALKER, JOHN E; PENNSYLVANIA'S REGIONAL INSTRUCTIONAL SYSTEM FOR EDUCATION (PRISE), LEHIGH VALLEY NETWORK (JOSONIA 411.100)

#### LOCK HAVEN STATE COLLEGE

BILLHARTZ, M. R., PENNSYLVANIA'S REGIONAL INSTRUCTIONAL SYSTEM FOR EDUCATION (PRISE), CENTRAL REGION NETWORK (JOSO201), 25 MONTHS \$10,000

BILLHARTZ, M H; PRISE (JOS0804 001); \$10,000

#### MANSFIELD STATE COLLEGE

WANICH, WILLIAM P. PENNSYLVANIA'S REGIONAL INSTRUCTIONAL SYSTEM FOR EDUCATION (PRISE), CENTRAL REGION NETWORK (JOS0803); 25 MONTHS \$2,000

WANICH, WILLIAM P; PRISE (JOSOPOS 001); \$8,600

#### MERCYHURST COLLEGE

BALDWIN, JOHN R; PENNSYLVANIA'S REGIONAL INSTRUCTIONAL SYSTEM FOR EDUCATION (PRISE), WESTERN REGION NETWORK (JOS0210); 24 MONTHS \$11,600

BALDWIN, JOHN R; PENNSYLVANIA'S REGIONAL INSTRUCTIONAL SYSTEM FOR EDUCATION (PRISE), WESTERN REGION NETWORK (JOS010 001); \$11,600

## MORAVIAN COLLEGE

BADER. MORRIS; PENNSYLVANIA'S REGIONAL INSTRUCTIONAL SYSTEM FOR EDUCATION (PRISE), LÄHIGH VALLEY NETWORK (JOIGES); 14 MONTHS \$12,200

BADER, MORRIS; PENNSYLVANIA'S REGIONAL INSTRUCTIONAL SYSTEM FOR EDUCATION (PRISE), WESTERN REGION NETWORK (JOS0218 001); \$12,200

## MUHLENBERG COLLEGE

LOY, WALTER; PENNSYLVANIA'S REGIONAL INSTRUCTIONAL SYSTEM FOR EDUCATION (PRISE), LEHIGH VALLEY NETWORK (JG50919); 14 MONTHS \$9,700

LOY, WALTER; PENNSYLVANIA'S REGIONAL INSTRUCTIONAL SYSTEM FOR EDUCATION (PRISE), LEGIGH VALLEY NETWORK (JOJO219 001); \$9,700

## PENNSYLVANIA STATE UNIVERSITY

LAIRD, DONALD T, AND BERNITT, DANIEL L; PENNSYLVANIA'S RE-GIONAL INSTRUCTIONAL SYSTEM FOR EDUCATION (PRISE), CENTRAL REGION NETWORK (JOSOFOI); 25 MONTHS \$32,200

LATRD, DONALD T, AND BERNITT, DANIEL L; PRISE (Josopol 001); \$32,200

## SLIPPERY ROCK STATE COLLEGE

CAMPAIONE, HOWARD; PENNSYLVANIA'S REGIONAL INSTRUC-TIONAL SYSTEM FOR EDUCATION (PRISE), WESTERN REGION NET-WORK (JOSO212): 24 MONT!\* 18,900

CAMPAIGNE, HOWARD; PRISE (JOSO218 001); \$8,900

## UNIVERSITY OF PITTSBURGH

GLASER, ROBERT; PROJECT FOR COMPUTER FEASIBILITY AND REQUIREMENTS FOR INDIVIDUALIZATION IN THE ELEMENTARY SCHOOL (Jocos40 Xos); 6 MONTHS \$35,100

CLASER, ROBERT, AND COOLEY, WILLIAM W; COMPUTER FEASI-BILITY AND REQUIREMENTS FOR INDIVIDUALIZATION IN THE ELE-MENTARY SCHOOL-PROJECT CONTINUATION (JOSSEP XO1), 12 MONTHS \$250,000

DWYER, THOMAS A; AN EXPERIMENT IN THE REGIONAL USE OF COMPUTERS BY SECONDARY SCHOOL SYSTEMS-PHASE II (1001077 001); 12 MONTHS \$173,00

ELLIS, R O; PENNSYLVANIA'S REGIONAL INSTRUCTIONAL SYSTEM FOR EDUCATION (PRISE), WESTERN REGION NETWORK (JG50708); 24 MONTHS \$36,900

ELLIS, R G; PRISE (JOJ0208 001); \$37,200

DWYER, THOMAS; A CASE STUDY IN THE PORTABILITY OF INSTRUC-TIONAL COURSEWARE AT THE SECONDARY SCHOOL LEVEL (JOSSES); 6 MONTHS \$60,500



UNIVERSITY OF SCRANTON

CASEY, PAUL J E J. PENNSYLVANIA'S REGIONAL INSTRUCTIONAL SYSTEM FOR EDUCATION (PRISE), CENTRAL REGION NETWORK COS, 14 EHTHOM SE ((1001010)

CASEY, PAUL J S J; PRISE (J030203 001); \$4,300

VILLA MARIA COLLEGE

PETERSON, G M; PENNSYLVANIA'S REGIONAL INSTRUCTIONAL SYSTEM FOR EDUCATION (PRISE), WESTERN REGION NETWORK U030\$11); 24 MONTHS \$9,600

PETERSON, G M; PRISE (JOJOS11 001); \$9,803

WESTMINSTER COLLEGE

HENDRY, RICHARD A; PENNSYLVANIA'S REGIONAL INSTRUC-TIONAL SYSTEM FOR EDUCATION (PRISE), WESTERN REGION NET-WORK (JOS0213); 24 MONTHS \$9,800 PEEK, JAMES M; PRISE (JOS0212 601); \$9,800

WILKES COLLEGE

WILLIAMS, DAVID: PENNSYLVANIA'S REGIONAL INSTRUCTIONAL SYSTEM FOR EDUCATION (PRISE), LEHIGH VALLEY NETWORK (JOSEO); 14 MONTHS \$10,600

WILLIAMS, DAVID; PRISE (JOS000 001); \$10,600

WILLIAMSPORT AREA COMMUNITY COLLEGE

BOYERS, RALPH L; PENNSYLVANIA'S REGIONAL INSTRUCTIONAL SYSTEM FOR EDUCATION (PRISE), CENTRAL REGION NETWORK (J640207); 25 KONTHS \$8,700

BOYERS, RALPH L: PRISE (JOSO207 001): \$8,700

UNIV OF TEXAS AT AUSTIN

JUDD, WILSON A, O'NEIL, HAROLD, AND SIMMONS, ROBERT F; EM-PIRICAL AND THEORETICAL FOUNDATIONS OF INSTRUCTIONAL DESIGN FOR COMPTER BASED INSTRUCTIONAL SYSTEMS, A PRO-GRAM OF RESEARCH AND DEVELOPMENT (JOSSOS XOS); 18 MONTHS \$169.R3A

BROWNE, JAMES C: AN EXPERIMENT IN THE TRANSPORTABILITY OF COMPUTER BASED CURRICULUM MATERIALS (JOJITAJ); 12 MONTHS \$68,400

## VIRGINIA

HOLLINS COLLEGE

HEGE, E KEITH; EXPERIMENT IN UTILIZING MINI-COMPUTER FACILITIES FOR INSTRUCTIONAL PURPOSES (JOS1144 001): 18 MONTHS \$1,800

**HUMAN RESOURCES RESEARCH ORGANIZATION** 

SEIDEL, ROBERT J: RESEARCH ON INSTRUCTIONAL DECISION MODELS (J000774 001); 12 MONTHS \$179,100

SEIDEL, ROBERT J; STRATEGIES FOR DEVELOPING COMPUTER. BASED CURRICULAR MATERIALS (JOSTISS); 22 MONTHS \$172,400

MITRE CORPORATION-MITRE CORPORATION

STETTEN, KENNETH J; DEMONSTRATION AND EVALUATION OF THE TICCIT CAI SYSTEM (C189000); 54 MONTHS \$1,000,000

STETTEN, KENNETH J; TOWARD A MARKET-GRIENTED COMPUTER
BASED LEARNING SYSTEM (JO28078 001); 6 MONTHS \$14,800

STETTEN, KENNETH J; MEASURING THE SOCIAL IMPACT OF IN-TERACTIVE TELEVISION (JOSPIES); 9 MONTHS \$299,600



# SPECIALIZED RESEARCH FACILITIES AND EQUIPMENT SUPPORT

## SPECIALIZED BMS RSCH, FACILITIES AND EQUIP,

#### CAUFORNIA

## California institute of Technology

SINSHEIMER, ROBERT L; PURCHASE OF SPECIALIZED EQUIPMENT FOR BIOLOGICAL RESEARCH (BOSTES); 12 MONTHS \$59,600

HOOD, LEROY E; EQUIPMENT FOR INVESTIGATING THE GENETIC CONTROL OF ANTIBODY DIVERSITY (BOSSESS); 12 MONTHS \$47,200

Dickerson, Richard E, and Stroud, Robert M; Special Equip-MENT FOR LARGE-PROTEIN X-RAY STRUCTURE ANALYSIS (BOSISSI); 12 MONTHS \$225,000

#### STANFORD UNIVERSITY

BERG, PAUL; PURCHASE OF A HIGH RESOLUTION ELECTRON MICROSCOPE (BOJ1440); 12 MONTHS \$70,000

## University of California, san Francisco

MORALES, MANUEL F; PURCHAS'S OF A LABORATORY COMPUTER SYSTEM (BOJESS); 12 MONTHS \$15,600

## COLORADO

## UNIVERSITY OF COLORADO

ALBERSHBIM, PETER, AND ALBERT, HARRISON; DESIGN OF EQUIPMENT FOR DATA ACQUISITION AND ANALYSIS SYSTEM FOR HIGH RESOLUTION GAS CHROMATOGRAPHY (BO32293); 12 MONTHS \$9,400

## CONNECTICUT

## YALE UNIVERSITY

KONIGSBERG, WILLIAM H. RICHARDS, FRANK F. AND SIBLEY, CHARLES G; EQUIPMENT FOR STUDIES OF PROTEIN STRUCTURE (BUSIN): 12 MONTHS \$44,600

## KLINOIS

## FIELD MUSEUM OF NATURAL HISTORY

SOLEM, G ALAN; PURCHASE OF A SCANNING ELECTRON MICROSCOPE (BGJLSI)\*): 24 MONTHS \$66.500

## NORTHWESTERN UNIVERSITY

DALLOS, PETER; SPECIAL PURPOSE DIGITAL COMPUTER (BOMESSI); 12 MONTHS \$36,100

## UNIVERSITY OF CHICAGO

HEINRIKSON, ROBERT L, LAW, JOHN H, AND STEINER, DONALD F; EQUIPMENT FOR A PROTEIN SEQUENCING CENTER (B034344); 12 MONTHS \$40,000

## INDIANA

## INDIANA UNIVERSITY, BLOOMINGTON

HIRS, CHRISTOPHE H W; SCANNING ELECTRON MICROSCOPE FACILITY (BOSELIS\*); 12 MONTHS \$30,000

## KANSAS

## KANSAS STATE UNIVERSITY

PITTS, CHARLES W, AND ROTH, L EVANS; PURCHASE OF A SCANNING BI BCTRON MICROSCOPE (BOJ2226); 12 MONTHS \$40,000

## MARYLAND

## JOHNS HOPKINS UNIVERSITY

ROSBMAN, SAUL; EQUIPMENT FOR RESEARCH IN MOLECULAR BIOLOGY (BOSESO); 12 MONTHS 870,000

BEER, MICHAEL; PURCHASE OF BIOLOGICAL RESEARCH EQUIP-MENT (BOSISSE), 12 MONTHS \$50,000

## MASSACHUSETTS

#### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

KING, JONATHAN A; PURCHASE OF AN ELECTRON MICROSCOPE FOR MACROMOLECULAR RECOGNITION AND ASSEMBLY (BOMBLE); 12 MONTHS MOON

#### MISSISSIPPI

#### MISSISSIPPI STATE UNIVERSITY

GLICK, BRUCE, AND YARBROUGH, JAMES D; ESTABLISHMENT OF AN ELECTRON MICROSCOPE FACILITY AT MISSISSIPPI STATE UNIVERSITY (BUJ410); 12 MONTHS \$30,000

#### **NEW YORK**

## AMERICAN MUSEUM OF NATURAL HISTORY

ROZEN, JEROME G JR; PURCHASE OF A SCANNING ELECTRON MICROSCOPE (BG31508); 24 MONTHS \$61,800

#### **BROOKHAVEN LABORATORY**

SHAW, ELLIOTT N, AND LEDBETTER, MYRON C; ELECTRON MICROSCOPY FACILITY (AGOS) 15; 12 MONTHS \$148,000

#### HUNTER COLLEGI

MAWE, RICHARD C; EQUIPMENT FOR THE GROWTH AND HARVEST-ING OF MICROORGANISMS (BOIJSES); 12 MONTHS \$27,600

## ROCKEFELLER UNIVERSITY

SIEKEVITZ, PHILIP: PARTIAL SUPPORT FOR SPECIALIZED RESEARCH EQUIPMENT (BOSSES); 12 MONTHS \$15,100

## SYRACUSE UNIVERSITY

BALBINDER, ELIAS; PURCHASE OF A LIQUID SCINTILLATION COUNTER (BOJJ808); 12 MONTHS \$18,000

## **NORTH CAROLINA**

## DUKE UNIVERSITY

BOYNTON, JOHN E, AND GILLHAM, NICHOLAS W; EQUIPMENT FOR THE STUDY OF HEREDITARY CONTROL OF ORGANILLE STRUCTURE AND FUNCTION (BOSELSE); 12 MONTHS \$17,500

## TENNESSEE

## GEORGE PEABODY COLLEGE FOR TEACHERS

HOGGE, JAMES H; EQUIPMENT FOR REALTIME ANALYSIS OF BIOELECTRIC SIGNALS (B031346); 12 MONTHS \$32,700

## WISCONSIN

## UNIVERSITY OF WISCONSIN, MADISON

ADAMS, MICHAEL II, AND BECKER, WAYNE; PURCHASE OF A LIQUID SCINTILLATION SYSTEM (BOSTIST); 12 MONTHS \$10,000

## UNIVERSITY ATMOSPHERIC RESEARCH FACILITIES

## **ALASKÁ**

## UNIVERSITY OF ALASKA-GEOPHYSICAL INSTITUTE

SWIFT, DANIEL W; DEVELOPMENT OF GEOPHYSICAL INSTITUTE DATA PROCESSING SYSTEM (AGS2099): 18 MONTHS \$33,000

## CALIFORNIA

## UNIVERSITY OF CALIFORNIA, BERKELEY

ANDERSON, KINSEY A: EQUIPMENT ITEMS WHICH WILL AID THE REDUCTION AND ANALYSIS OF SCIENTIFIC DATA (A032280); 12 MONTHS \$49,000



## MARYLAND

NATIONAL GCEANIC ATMOSPHERIC ADMINISTRATION-NATIONAL ENVIRONMENTAL SATELLITE SERVICE JOHNSON, DAVID 8; PROCUREMENT OF SMS DATA UTILIZATION STATION (DUS) (AGOSSO): 18 MONTHS 5116,000

#### Albuta the second of

DARTMOUTH COLLEGE-THAYER SCHOOL OF ENGINEERING MORGAN, MILLETT G: TO PURCHASE A DIGITAL SPECTRUM. ANALYZER (AGITAL); 12 MONTES \$23,300

#### NEW YORK

STATE UNIVERSITY AT ALBANY

BCHAEFER, VINCENT J, AND HOGAN, AUSTIN W; AEROSOL CONCENTRATIONS ON A GLOBAL SCALE (AGISSOF); 12 MONTHS \$25,000

COLUMBIA UNIVERSITY-LAMONT-DOHERTY GEOLOGICAL OBSERVATORY

DONN, WILLIAM L: ELECTRONIC FACILITIES FOR INFRASOUND PROGRAM (A032254): 12 MONTHS \$29,400

#### LITAN

UTAH STATE UNIVERSITY

CLARK, CLAYTON: ATMOSPHERIC MODELING FACILITY (A012857); 12 MONTHS \$14,000

## SPECIALIZED SOCIAL SCIENCE RESEARCH FACILITIES

## CALIFORNIA

UNIVERSITY OF CALIFORNIA, BERKELEY

BALDERSTON, F E; OPERATION OF A MANAGEMENT SCIENCE RESEARCH FACILITY (SOJIIJE\*); 12 MONTHS 8172,000

UNIVERSITY OF CALIFORNIA, SAN DIEGO

SMITH, TIMOTHY S; EQUIPMENT FOR RESEARCH IN EXPERIMENTAL LINGUISTICS (SOJIDIE): 12 MONTHS 457,200

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

PREMACK, DAVID: FACILITY FOR RESEARCH ON LANGUAGE BEHAVIOR IN THE CHIMPANZEE (SOMMEN): 12 MONTHS \$60,000

## CONNECTICUT

HASKINS LABORATORIES INC

COOPER, FRANKLIN S, AND LIEBERMAN, ALVIN M; A DIGITAL PLAYBACK FOR RESEARCH ON NATURAL SPEECH (S088351 001); \$53,500

## SOUTH CAROUNA

UNIVERSITY OF SOUTH CAROLINA

STEPHENSON, ROBERT L; EQUIPMENT FOR SPECIALIZED ARCHEOLOGICAL AND ANTHROPOLOGICAL RESEARCH FACILITY (SOSISIS); 18 MONTHS \$32,200

## WASHINGTON

WASHINGTON STATE UNIVERSITY

IRWIN, HENRY T J; EQUIPMENT FOR SEMI-AUTOMATED COLLECTION OF ARCHAEOLOGICAL DATA (SOSIIL); 12 MONTHS \$10,000

## EARTH SCIENCES RSCH, FACILITIES AND EQUIP.

## HUNOIS

UNIVERSITY OF CHICAGO

CLAYTON, ROBERT N, AND SMITH, JOSEPH V; CHEMICAL AND ISOTOPE ANALYSIS WITH AN ION MICROPROBE (A034131\*); 12 MONTHS \$48,600

## INDIANA

INDIANA UNIVERSITY, BLOOMINGTON

HIRS, CHRISTOPHE H W; SCANNING ELECTRON MICROSCOPE FACILITY (BOILETS); IR MONTHS \$10,000

## PENNSYLVANIA

FRANKLIN AND MARSHALL COLLEGE

MORSE, STEARNS A; FACILITY FOR CRUSTAL STUDIES IN COASTAL LABRADOR (A011114 001); \$4,100

PENNSYLVANIA STATE UNIVERSITY

BURNHAM, C WAYNE; SPECIALIZED RESEARCH EQUIPMENT (ASSISS), 12 MONTHS \$20,200

# OCEANOGRAPHIC RESEARCH VESSELS AND FACILITIES

## UNIVERSITY OCEANOGRAPHIC EQUIPMENT

#### ALACKA

University of Alaska-Institute of Marine Science

GOERING, JOHN J, AND MCROY, C PETER; ANALYSES TO STUDY A PACKARD ISN ANALYSER TO STUDY THE BIOLOGICAL CYCLING OF NITROGEN IN THE SEA (A004007); 12 MONTHS \$10,000

#### NEW YORK

COLUMBIA UNIVERSITY-LAMONT-DOHERTY GEOLOGICAL OBSERVATORY

HAYS, JAMES D, AND KING, KENNETH JR; SPECIALIZED RESEARCH EQUIPMENT- AUTOMATIC AMINO ACID ANALYZER (ACI;119); 12 MONTHS \$46,200

#### OREGON

OREGON STATE UNIVERSITY

CUTSHALL, NORMAN; ATOMIC ABSURPTION SPECTROPHOTOMETER (Addition); 12 MONTHS \$16,500

#### RHODE ISLAND

University of Rhode Island

KENNETT, JAMES P. AND WATKINS, NORMAN D; THE ESTABLISH-MENT OF A DEEP-SEA PISTON CORING FACILITY (AM1113); 12 MONTHS 19,800

## WASHINGTON

University of Washington

RICHARDS, FRANCIS A: EQUIPMENT FOR COMPUTING AND SALINI-TY-TEMPERATURE-DEPTH SYSTEMS (ACMION), 12 MONTHS \$18,000

## UNIVERSITY PHYSICS RESEARCH FACILITIES

## HIGH ENERGY FACILITIES

## CAUFORNIA

STANFORD UNIVERSITY

FAIRBANK, W M, HOFSTADTER, ROBERT, SCHWARTZ, MELVIN, SCHWETTMAN, H A, AND WOJCICKI, STANLEY; HIGH ENERGY PHYSICS, CRYOGUNIC RESEARCH, AND GRAVITATIONAL RADIATION (POSSESS COI®); 12 MONTHS \$340,000

## **NEW YORK**

CORNELL UNIVERSITY

MCDANIEL, B D; OPERATIONAL SUPPORT OF THE 10 GEV ELECTRON SYNCHROTRON FACILITY (CLIFOOD 018\*), 12 MONTHS \$330,000

MCDANIEL, B D; OPERATIONAL SUPPORT OF THE 10 GEV ELECTRON SYNCHROTRON FACILITY (C537000 013°); \$180,000

## LOW ENERGY FACILITIES

## INDIANA

indiana university, bloomington

RICKEY, MARTIN E, AND MILLER, DANIEL W; EXPERIMENTAL FACILITIES FOR THE INDIANA CYCLOTRON (POSISIS 002); 15 MONTHS \$100,000

## CHEMISTRY RESEARCH INSTRUMENTS

## ARIZONA

UNIVERSITY OF ARIZONA

HALL, H K JR; PURCHASE OF A DIGITAL DATA ACQUISITION SYSTEM (POISSOS): 12 MONTHS \$14,000

## CAUFORNIA

CALIFORNIA STATE UNIVERSITY, LOS ANGELES
GOLDWHITE, HAROLD; PURCHASE OF A MASS SPECTROMETER (POSSTA); 12 MONTHS \$60,000

California State University, San Francisco

BERTIN, HENRY J; PURCHASE OF AN ELECTRON SPIN RESONANCE SPECTROMETER (POSISO): 12 MONTHS \$30,000



UNIVERSITY OF CALIFORNIA, BERKELEY

BHIRLEY, DAVID A; PURCHASE OF A NUCLEAR MAGNETIC RESONANCE SPECTROMETER (POSETR); 12 MONTHS \$25,000

UNIVERSITY OF CALIFORNIA, LOS ANGELES

BCOTT, ROBERT L; PURCHASE OF A DATA ACQUISITION SYSTEM (POISSOI); 12 MONTHS \$60,000

UNIVERSITY OF CALIFORNIA, RIVERSIDE

HELMKAMP, GEORGE K; PURCHASE OF A DATA ACQUISITION AND CONTROL SYSTEM (Posteet); 12 MONTHS \$55,000

UNIVERSITY OF CALIFORNIA, SAN DIEGO

KAMEN, MARTIN D; PURCHASE OF A NUCLEAR MAGNETIC RESONANCE SPECTROMETER (POISSES); 12 MONTHS \$130,000

#### COLORADO

COLORADO STATE UNIVERSITY

OSTERYOUNG, ROBERT A; PURCHASE OF AN ION CYCLOTRON RESONANCE SPECTROMETER (POSSES). 12 MOINTHS \$43,000

#### CONNECTICUT

YALB UNIVERSITY

BERSON, JEROME A; PURCHASE OF AN ELECTRON SPECTROMETER (P047994 001); 8 MONTHS \$38,000

#### DELAWARE

UNIVERSITY OF DELAWARE

VENANZI, LUIGI M; PURCHASE OF A DIGITAL DATA SYSTEM (POSSION), 12 MONTHS \$15,000

#### GEORGIA

GEORGIA INSTITUTE OF TECHNOLOGY

SPICER, WILLIAM M; PURCHASE OF A MASS SPECTROMETER (POJS793); 12 MONTHS \$38,000

#### ILLINOIS

NORTHWESTERN UNIVERSITY

BASOLO, FRED; PURCHASE OF A NUCLEAR MAGNETIC RESONANCE SPECTROMETER (PG:1854): 12 MONTHS \$37,000

UNIVERSITY OF CHICAGO

RICE, STUART A; PURCHASE OF A NUCLEAR MAGNETIC RESONANCE SPECTROMETER (POSSITE); 12 MONTHS \$100,000

UNIVERSITY OF ILLINOIS AT URBANA

GUTOWSKY, H S; PURCHASE OF MAGNETIC RESONANCE INSTRU-MENTATION (POSSESS), 12 MONTHS \$70,000

## MDIANA

INDIANA UNIVERSITY, BLOOMINGTON

SCHAEFFER, R O; PURCHASE OF DATA ACQUISITION SYSTEM FOR MASS SPECTROMETER (POSSESS): 12 MONTHS \$36,000

## KANSAS

KANSAS STATE UNIVERSITY

DAANE, A H; PURCHASE OF A DIGITAL DATA SYSTEM (POSSIOS); 12 MONTHS \$18,000

UNIVERSITY OF MANSAS

LANDGREBE, JOHN A; PURCHASE OF STOPPED-FLOW KINETIC AP-PARATUS (POJ1JOS); 12 MONTHS \$12,000

## MASSACHUSETIS

HARVARD UNIVERSITY

VANELLI, RONALD E: PURCHASE OF A NUCLEAR MAGNETIC RESONANCE SPECTROMETER (POSESIT); 12 MONTHS \$140,000

MOUNT HOLYOKE COLLEGE

HALL, GEORGE E; PURCHASE OF A SPECTROPHOTOMETER (PG31485); 12 MONTHS 215.000

## MICHIGAN

MICHIGAN STATE UNIVERSITY

KINSINGER, J B; PURCHASE OF A LASER RAMAN SPECTROMETER (POLITICAL); 12 MONTHS \$28,500

## MINNESOTA

UNIVERSITY OF MINNESOTA

HEXTER, R M; PURCHASE OF A MASS SPECTROMETER (Postion); 12 MONTHS \$60,000

## MISSISSIPP

UNIVERSITY OF MISSISSIPPI

SCOTT. ROBERT B JR; PURCHASE OF AN ULTRAVIOLET-VISIBLE SPECTROPHOTOMETER (POSISS); 12 MONTHS \$22,000

#### MICCOLINI

UNIVERSITY OF MISSOURI, COLUMBIA

TROUTNER, DAVID E: PURCHASE OF AN AYOMIC ABSORPTION SPECTROPHOTOMETER (POSSES): 12 MONTHS \$10,000

#### NEERASKA

UNIVERSITY OF NEBRASKA AT LINCOLN

BAUMGARTEN, HENRY E; PURCHASE OF AN X-RAY DIFFRACTOME. TER (POJSUS): 12 MONTHS \$13,700

#### **NEW JERSEY**

PRINCETON UNIVERSITY

MISLOW, KURT; PURCHASE OF A MASS SPECTROMETER SYSTEM (POSSESS); 12 MONTHS \$68,000

RUTGERS UNIVERSITY

BIRD, GEORGE R; PURCHASE OF A FAR INFRARED SPECTROMETER (POI2800); 12 MONTHS \$30,000

#### MAW YORK

**COLUMBIA UNIVERSITY** 

MILLER, J MALCOLM; PURCHASE OF ELECTRONIC INSTRUMENTA-TION FOR RESEARCH IN CHEMICAL PHYSICS (POSSESS); 12 MONTHS \$20,000

CORNELL UNIVERSITY

HAMMES, GORDON G; PURCHASE OF A RAMAN SPECTROMETER (POISSOS); 12 MONTHS \$30,000

SYRACUSE UNIVERSITY

VINCOW, GERSHON; PURCHASE OF AN ELECTRON SPIN RESONANCE SPECTROMETER (POSSESSE): 12 MONTHS \$25,000

## NORTH CAROUNA

DUKE UNIVERSITY

QUIN, LOUIS D; PURCHASE OF COMPONENTS FOR AN ELECTRON SPIN RESONANCE SPECTROMETER (POISSON): 12 MONTHS \$25,000

UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

HISKEY, R G; PURCHASE OF A FOURIER TRANSFORM INFRARED SPECTROPHOTOMETER (POSSESS); 12 MONTHS \$39,000

## OHIO

UNIVERSITY OF CINCINNATI

JAFFE, HANS H, AND DAHLGREN, C; PURCHASE OF AN X-RAY FLUORESCENCE SPECTROMETER (POJJSJI); 12 MONTHS \$18,000

## PENNSYLVANIA

CARNEGIE-MELLON UNIVERSITY

CARETTO, ALBERT A JP; PURCHASE OF A GAMMA SPECTROMETER SYSTEM (POSESS); 12 MONTHS \$10,000

PENNSYLVANIA STATE UNIVERSITY

DIKON, JOSEPH A; PURCHASE OF A NUCLEAR MAGNETIC RESONANCE SPECTROMETER (P032823); 12 MONTHS \$120,000

## SOUTH CAROUNA

FURMAN UPIVERSITY

KUBLER, DONALD G; PURCHASE OF A RAMAN SPECTROMETER (POSEROF): 12 MONTHS 117,000

## TEXAS

RICE UNIVERSITY

MARGRAVE, JOHN L; PURCHASE OF AN ELECTRON SPIN RESONANCE SPECTROMETER (PGJ2824); 12 MONTHS \$30,000

TEXAS A & M UNIVERSITY

MARTELL, ARTHUR E; PURCHASE OF A NUCLEAR MAGNETIC RESONANCE SPECTROMETER (POSESIE); 12 MONTHS \$57,300

## UTAH

UNIVERSITY OF TITAL

GRANT, DAVID M; PURCHASE OF A DIGITAL DATA SYSTEM (POSSISS); 12 MONTHS \$40,600

## VIRGINIA

UNIVERSITY OF VIRGINIA

SCHATZ, PAUL N; PURCHASE OF COMPONENTS FOR AN EMISSION SPECTROMETER (POSSTER); 12 MONTHS \$17,000

## WISCONSIN

UNIVERSITY OF WISCONSIN, MADISON

WILLARD, JOHN E; PURCHASE OF AN INFRARED-RAMAN SPEC-TROMETER SYSTEM (POSSESS); 12 MONTHS \$70,000



# SPECIALIZED ENGINEERING AND MATERIALS RESEARCH FACILITIES

## ENGINEERING RESEARCH FACILITIES AND EQUIPMENT

#### CALIFORNIA

#### STANFORD UNIVERSITY

KSU, E Y; PURCHASE OF A DATA ACQUISITION REDUCTION SYSTEM FOR THE STANFORD WIND, WATER-WAVE RESEARCH FACILITY (KOSSESS); 12 MONTHS \$30,500

## UNIVERSITY OF CALIFORNIA, BERKELEY

HODGES, D. A; SPECIALIZED RESEARCH EQUIPMENT - EPITAXIAL REACTOR AND SPUTTER ETCH SYSTEMS (KOJSSIS); 12 MONTHS \$38,000 SAKRISON, D J; SPECIALIZED RESEARCH EQUIPMENT - CORE MEMORY FOR COMPUTER PROCESSOR-CONTROLLER (KOJSSIT); 12 MONTHS \$17,200

#### COLORADO

## UNIVERSITY OF COLORADO

RAMIREZ, W FRED; SPECIALIZED RESEARCH EQUIPMENT- MINI-COMPUTER FOR STUDIES IN CHEMICAL PROCESS DYNAMICS (KOS 1821): 12 MONTHS \$10,000

#### CONNECTICUT

## UNIVERSITY OF CONNECTICUT

BENNETT, C O; AN INFRARED SPECTROMETER FOR THE STUDY OF ADSORBED SPECIES DURING CATALYSIS (KOM488); 12 MONTHS \$15,000

## DISTRICT OF COLUMBIA

#### GEORGETOWN UNIVERSITY

TORIDIS, THEODORE G. PURCHASE OF EQUIPMENT FOR PROJECT MANAGEMENT AND COMPUTER AIDED DESIGN RESEARCH (KGJJP77); 12 MONTHS \$29,900

#### **ILLINOIS**

#### ILLINOIS INSTITUTE OF TECHNOLOGY

VEY. EBEN: PURCHASE OF MAGNETIC TAPE DATA ACQUISITION SYSTEM (KOJJOTI); 12 MONTHS \$23,100

## UNIVERSITY OF ILLINOIS AT URBANA

WESTWATER, JAMES W; SPECIALIZED RESEARCH EQUIPMENT FOR COMPUTERIZATION (KOJ4129); 12 MONTHS \$8,300

WESTWATER, JAMES W; SPECIALIZED RESEARCH EQUIPMENT- UL-TRAVIOLET SPECIROPHOTOMETER FACILITY (KOJ4354); 12 MONTHS 85.700

## INDIANA

## PURDUE UNIVERSITY

HUNGERFORD, H E; BASIC NEUTRON SPECTROSCOPY (KOJ2455); 12 MONTHS \$11,000

COHEN, RAYMOND, AND CROCKER, MALCOLM 3; MACHINERY NOISE CONTROL (KGISISS); 12 MONTHS \$19,700

SCHIFF. ANSHEL 3; PURCHASE OF EQUIPMENT FOR MEASURING WIND LOADS ON STRUCTURES (KOJJSTE): 12 MONTHS \$19,700

## UNIVERSITY OF NOTRE DAME

LLOYD, J. R. AND NOVOTNY, J. L.; PURCHASE OF DATA ACQUISITION EQUIPMENT (KOSLIIB); 12 MONTHS \$11,500

## KENTUCKY

## UNIVERSITY OF KENTUCKY

BIRKEBAK, RICHARD; UPGRADING OF A DATA ACQUISITION SYSTEM (KOSISSS); 12 MONTHS \$8,700

## MASSACHUSETTS

## WORCESTER POLYTECHNIC INSTITUTE

WEISS, ALVIN H; SPECIALIZED RESEARCH EQUIPMENT- HIGH PRESSURE THERMO ANALYTICAL FACILITY (ROSSISS); 12 MONTHS \$12,200

## **MICHIGAN**

## MICHIGAN STATE UNIVERSITY

WILKINSON, BRUCE W; SPECIALIZED RESEARCH EQUIPMENT-FLUE GAS DESULFURIZATION BY CENTRIFUGATION (KOSLE-1); 24 MONTHS \$12,500

## UNIVERSITY OF MICHIGAN

CLARK, JOHN A; SPECIALIZED RESEARCH EQUIPMENT FOR MECHANICAL AND INDUSTRIAL ENGINEERING (KOSS969); 12 MONTHS \$9,700

#### MISSOURI

## UNIVERSITY OF MISSOURI, COLUMBIA

DWYER, SAMUEL J III; SPECIALIEED RESEARCH EQUIPMENT, AU-TOMATED VISUAL SYSTEMS RESEARCH (KOSTIO); 12 MONTHS \$79,100

#### NEW JERSEY

## RUTGERS UNIVERSITY

PESKIN, RICHARD L; LASER DOPPLER ANEMOMETRY EQUIPMENT (KO33938); 12 MONTHS \$20,000

#### NEW YORK

#### COLUMBIA UNIVERSITY

SHINOZUKA, MASANOBU; PURCHASE OF RANDOM SIGNAL PROCESSING EQUIPMENT (KOSSIES); 12 MONTHS \$31,100

#### RENSSELAER POLYTECHNIC INSTITUTE

ALTWICKER, ELMAR R; SPECIALIZED RESEARCH EQUIPMENT-TRACE GAS ANALYZER (KOSSIS); 12 MONTHS \$12,500

BIRNBOIM, MEYER H; EQUIPMENT FOR THE STUDY OR BIOMECHANICS OF SYNOVIAL JOINTS (KOJJETE), 12 MONTHS \$27,000

## TRACUSE UNIVERSITY

DOSANJH, DARSHAN S; ENLARGEMENT OF AN ANECHOIC CHAMBER FOR NOISE RESEARCH (KOSSSS); 12 MONTHS \$24,000

#### UNIVERSITY OF ROCHESTER

SALTSBURG, HOWARD, AND ANDERSON, J H JR; SPECIALIZED RESEARCH EQUIPMENT- FUNDAMENTAL STUDIES IN CATALYSIS (KG9416); 12 MONTHS \$20,000

#### **NORTH CAROLINA**

#### NORTH CAROLINA STATE UNIVERSITY AT RALEIGH

WALSH, WILLIAM K; PURCHASE OF A 500 KY ELECTRON ACCELERATOR (KOSSISO); 12 MONTHS \$44,000

#### OREGON

#### OREGON STATE UNIVERSITY

NATH, JOHN H; PURCHASE OF EQUIPMENT FOR STUDIES OF WIND AND WAVE FORCES ON STRUCTURES (KOSSETO); 12 MONTHS \$21,700

#### PENNSYLVANIA

## CARNEGIE-MELLON UNIVERSITY

TUMA, DAVID T; SPECIALIZED RESEARCH EQUIPMENT FOR ELEC-TRON ENERGY DISTRIBUTION AND EXCITATION IN GAS DISCHARGES (KO33089); 12 MONTHS \$4,890

## . PENNSYLVANIA STATE UNIVERSITY

CONWAY, J C; INTERFEROMETRIC AND HOLOGRAPHIC EQUIPMENT FOR SOLID MECHANICS RESEARCH (KOJJSTJ); 12 MONTHS \$3,000

## RHODE ISLAND

## UNIVERSITY OF RHODE ISLAND

LEBLANC, LESTER R, AND MOFFETT, MARK B; EQUIPMENT FOR RESEARCH IN NONLINEAR ACOUSTICS, MARINE DATA PROCESSING, AND SUBMARINE SOIL MECHANICS (KOSIFSS); 12 MONTHS \$20,000

## TENNESSEE

## MEMPHIS STATE UNIVERSITY

SMITH, JOHN W; SPECIALIZED RESEARCH EQUIPMENT- ANALYTI-CAL CHROMATOGRAPHY (KOSLESO); 12 MONTHS \$6,600

## WASHINGTON

## UNIVERSITY OF WASHINGTON

VLASES, GEORGE C; SPECIALIZED EQUIPMENT FOR AN ELECTRON BEAM STABILIZED PULSED COI LASER (KOSSIIS); 12 MONTHS \$20,000

## MATERIALS RESEARCH FACILITIES AND EQUIPMENT

## CALIFORNIA

## UNIVERSITY OF CALIFORNIA, BERKELEY

EVERHART, T E; ACQUISITION OF A LINE PRINTER AND INCRE-MENTAL PLOTTER FOR AN IBM 1800 COMPUTER SYSTEM (HOJ2412); 12 MONTHS 84.000

## University of California, san diego

SCHULTZ, SHELDON; ION MILLING MACHINE AND ASSOCIATED VACUUM SYSTEM (HOLDIO), 12 MONTHS \$19,000

## PLORIDA

## University of Miami

ALEXANDRAKIS, GEORGE C; MICROWAVE TRANSMISSION RESONANCE STUDIES IN TRANSITION METALS AND THEIR ALLOYS (HOJIBIS); 12 MONTHS \$5,600



## MASSACHUSETTS

## MASSACHUSETTS INSTITUTE OF TECHNOLOGY

LAX, BENJAMIN; OPERATION OF A HIGH MAGNET FIELD RESEARCH AND DEVELOPMENT LABORATORY (C410000 003\*); \$80,000

#### MISSOURI

#### BT LOUIS UNIVERSITY

LEE, SOOK; VARIAN 18-INCH ELECTROMAGNET SYSTEM (HOJ4661); 12 MONTHS \$10,000

#### NEW JERSEY

## STEVENS INSTITUTE OF TECHNOLOGY

WEIL, ROLF; PURCHASE OF AN ELECTRON MICROSCOPE (Kestiki), 12 MONTHS \$7.50)

#### NEW YORK

## RENSSELARR POLYTECHNIC INSTITUTE

TOMOZAWA, MINORU; EQUIPMENT GRANT- LIGHT SCATTERING PHOTOMETER (HOSISTA); 18 MONTHS \$15,900

#### OHO

## CASE WESTERN RESERVE UNIVERSITY

GEIL, P H; PURCHASE OF MICRODENSITOMETER (HOLLSES); 12 MONTHS \$21,800

## UNIVIRSITY OF CINCINNATI

BOERIO, F JAMES; AN INFRARED SPECTROMETER FOR POLYMER CHARACTERIZATION (HOSISTO): 12 MONTHS \$23,200

#### OKLAHOMA

## OKLAHOMA STATE UNIVERSITY

SIBLEY, WILLIAM A; ELECTRONIPOSITIVE ION ACCELERATOR FOR USE IN THE PHYSICS RESEARCH LABORATORY (HOSSISS); 12 MONTHS \$31,500

#### PENNSYLVANIA

## CARNEGIE-MELLON UNIVERSITY

SEKERKA, ROBERT F; IMAGE ANALYZING COMPUTER (HOSISSS); 12 MONTHS \$31,200

## PENNSYLVANIA STATE UNIVERSITY

WHITE, E W; EQUIPMENT GRANT FOR A SCANNING ELECTRON MICROSCOPE (HOSS788); 12 MONTHS \$37,500

## UNIVERSITY OF UTAH

SOSIN, ABRAHAM; EQUIPMENT TO SUPPORT MEASUREMENTS OF THE MECHANICAL CHARACTERIZATION OF POLYMERS (HOJST80); 12 MONTHS \$20,000

#### WEST VIRGINIA

## WEST VIRGINIA UNIVERSITY

PAYLOVIC, A S; EXPANSION OF CRYSTAL GROWING FACILITIES IN THE PHYSICS DEPARTMENT (HOJ1886); 12 MONTHS \$13,900

#### WISCONSIN

## MARQUETTE UNIVERSITY

CARTZ, LOUIS; EQUIPMENT GRANT FOR A 'HIGH INTENSITY X-RAY SOURCE' (Hossiste), 12 MONTHS \$22,900

## UNIVERSITY OF WISCONSIN, MADISON

PRUETT, CHARLES H; NEW VACUUM UV AND SOFT X-RAY BEAM LINES (HOSSES); 12 MONTHS \$62,300

#### WYCMING

#### UNIVERSITY OF WYOKING

GRANDY, WALTER T JR; COMPLETE CRYOGENICS FACILITY (HOSELDS); 12 MONTHS \$7,500

# UNIVERSITY ASTRONOMY RESEARCH FACILITIES AND EQUIPMENT

#### CAUFORNIA

## CALIFORNIA INSTITUTE OF TECHNOLOGY

COHEN. MARSHALL R, AND MOPFET, ALAN T; RECEIVING EQUIP-MENT FOR RADIO ASTRONOMY RESEARCH (PO14591); 24 MONTHS \$33,000

## University of California, Berkeley

WELCH, WILLIAM J; DEVELOPMENT OF THE HAT CREEK CHIMM WAVELENGTH INTERFEROMETER (POSSESS 001); 12 MONTHS \$97,600 UNIVERSITY OF CALIFORNIA, SANTA CRUZ

WALKER, MERLE F; ELECTRONOGRAPHY IN ASTRONOMICAL PHOTOMETRY AND SPECTROSCOPY (POSSESS 001); \$25,000

#### OHIO

## OHIO STATE UNIVERSITY

SLETTEBAK, ARNE; IMAGE TUBE INSTRUMENTATION (POJSES); 24 MONTHS \$82,000

# RESEARCH APPLIED TO NATIONAL NEEDS (RANN)

## NON-CLASSIFIED

#### CALIFORNIA

MASSELL, BENTON F; OTHER PROGRAM AWARDS (04AWDS); 15 MONTHS \$194,660

#### CONNECTICUT

LEHAN, EDWARD A; OTHER PROGRAM AWARDS (GIAWDS); 12 . MONTHS \$37,600

#### DISTRICT OF COLUMBIA

NONE; OTHER PROGRAM AWARDS (06AWDS); \$41,669

#### MARYLAND

NONE; OTHER PROGRAM AWARDS (04AWDS); \$800

#### MASSACHUSETTS

KELLY, EDWARD; OTHER PROGRAM AWARDS (01AWDS); 12 MONTHS 26,800

#### MISSOURI

TUDOR, JAMES; OTHER PROGRAM AWARDS (GIAWDS); 12 MONTHS \$49,000

## **NEW YORK**

NONE; OTHER PROGRAM AWARDS (02AWDS); \$58,211

## SOUTH CAROUNA

BUNGAY, HENRY R III; OTHER PROGRAM AWARDS (01AWDS); 12 MONTHS \$35,130

## VIRGINIA

NONE; OTHER PROGRAM AWARDS (04AWDS); \$11,560

## ADVANCED TECHNOLOGY APPLICATIONS

## ALASKA

UNIVERSITY OF ALASKA

HICKEL, WALTER J; GEOTHERMAL RESOURCES RESEARCH CONFERENCE (IGS) 13); 8 MONTHS \$49,000

UNIVERSITY OF ALASKA-GROPHYSICAL INSTITUTE

PULPAN, HANS, AND BERG, EDUARD; SEISMIC ENGINEERING STU-DIES IN ALASKA (A01444'); 24 MONTHS \$2,000

## ARIZONA

UNIVERSITY OF ARIZONA

MEINEL, ADEN B; STUDIES OF THERMAL CONVERSION OF SOLAR ENERGY FOR ELECTRICAL POWER PRODUCTION (1030012 001); 6 MONTHS \$107,000

## **CALIFORNIA**

AEROSPACE CORPORATION

GREENBERG, A B; SYSTEM ANALYSIS OF PHOTOTHERMAL CONVERSION SYSTEMS (C11000); 6 MONTHS \$125,000

CALIFORNIA INSTITUTE OF TECHNOLOGY

HUDSON, DONALD E; NATIONAL INFORMATION SERVICE FOR EARTHQUARE ENGINEERING (1028002 X01); 12 MONTHS \$98,200

ZUKOŠKI, EDWARD E; CONVECTIVE FLOWS OF BUILDING FIRES (1031892 X00); 12 MONTHS \$39,800

IWAN, WILFRED D; THREE-YEAR OPERATION OF THE UNIVERSITIES COUNCIL FOR BARTHQUAKE ENGINEERING RESEARCH (1032585); 36 MONTHS \$49,500

HUDSON, DONALD E; STRONG-MOTION DATA ANALYSIS AND STRUCTURAL DYNAMICS INVESTIGATIONS OF THE SAN FERNANDO EARTHQUAKE OF FEBRUARY 9, 1871 (1093574); 6 MONTHS \$27,400 HUDSON, DONALD E; NATIONAL INFORMATION SERVICE FOR

EARTHQUAKE ENGINEERING (1034815): 12 MONTHS \$148,000

## NEW EXTENSIONS FOR UTILIZING SCIENTISTS INC

REID, CONRAD H; AN INFORMATION EXCHANGE IN ENZYME TECHNOLOGY (1033675); 24 MONTHS \$25,600

#### RAND CORPORATION

MORRIS, DEANE N; THE GROWING DEMAND FOR ENERGY (1000044 002); 12 MONTHS 8524,000

#### STANFORD RESEARCH INSTITUTE

ANBAR, MICHAEL; FOLLUTION-FREE ELECTROCHEMICAL ENERGY GENERATION FROM FUEL (1031/07); 15 MONTHS \$99,200

## STANFORD UNIVERSITY

EUSTIS, R H, MHD PHENOMENA AT HIGH MAGNETIC FIELDS (1034920); 12 MONTHS \$147,200

KRUGER, PAUL; STIMULATION OF GEOTHERMAL AQUIFERS FOR CONTRIBUTING TO THE ENERGY REQUIREMENTS OF THE UNITED STATES (1034985); 12 MONTHS \$141,500

SHAH. HARESH C; MEASUREMENTS OF DYNAMIC CHARAC-TERISTICS OF MULTISTORY BUILDINGS SUBJECTED TO SAN FERNAN-DO EARTHQUAKE (logistic); 12 Months \$28,400

KAPLAN, HENRY S, AND SCHWETTMAN, H ALAN; TO DEVELOP A PION FACILITY FOR CANCER THERAPY (1035007); 18 MONTHS \$717,700

## UNIVERSITY OF CALIFORNIA, BERKELEY

MACK, DICK A; INSTRUMENTATION FOR ENVIRONMENTAL MONITORING (AGO0271 001); 12 MONTHS \$200,900

AVERY, ROBERT T, BREKKE, TOR L, KEEFE, DENIS, AND FINNIE, IAIN: ROCK SHATTERING WITH ENERGETIC ELECTRONS (AGGOSS); 10 MONTHS \$48,900

PENZIEN, JOSEPH; NATIONAL INFORMATION CENTER FOR EARTHQUAKE ENGINEERING (1028319 X01); 12 MONTHS \$138,300

BERTERO, VITELMO V; INVESTIGATION OF THE BEHAVIOR OF THE OLIVE VIEW MEDICAL CENTER DURING THE FEBRUARY 9, 1871 SAN FERNANDO EARTHQUAKE (101893) 001); 12 MONTHS \$111,000

SEED, H BOLTON; INVESTIGATION OF GROUND MOTIONS AND SOIL STABILITY PROBLEMS IN THE SAN FERNANDO AREA DURING THE EARTHQUAKE OF FEBRUARY 9, 1971 (1029938 001); 12 MONTHS \$97,900

PENZIEN, JOSEPH, AND CHOPRA, ANIL K; ENERGY ABSORPTION CHARACTERISTICS OF STRUCTURAL SYSTEMS SUBJECTED TO EARTHQUAKE EXCITATION (103188); 12 MONTHS \$317,800

BOLT, BRUCE A; STUDIES OF GROUND MOTIONS IN LOCAL EARTHQUAKES (1014307); 24 MONTHS \$32,600

TREZEK, GEORGE 3; A COMPREHENSIVE RESEARCH PROGRAM ON MANAGEMENT OF HEAT REJECTED FROM LARGE POWER PLANTS (IOSISS); 12 MONTHS \$145,500

PENZIEN, JOSEPH; MONITORING EQUIPMENT FOR THE UNIVERSITY OF CALIFORNIA, BERKELEY, SHAKING TABLE (1034946); 12 MONTHS \$38,600

PENZIEN, JOSEPH; ENERGY ABSORPTION CHARACTERISTICS OF STRUCTURAL SYSTEMS SUBJECTED TO EARTHQUAKE EXCITATION (Ro14847 001); 1 MONTHS \$80,000

## UNIVERSITY OF CALIFORNIA. DAVIS

CAHILL, T A; DEVELOPMENT OF X-RAY FLUORESCENCE ANALYSIS AND APPLICATION TO ATMOSPHERIC AEROSOLS (1031939); 12 MONTHS 121,250

## UNIVERSITY OF CALIFORNIA, INVINE

LENHOFF, HOWARD M; DEVELOPMENT OF IMMOBILIZED COUPLED ENZYME SYSTEMS FOR REGENERATING ATP AND NADPH (IGS1921); 12 MONTHS \$67,800

## UNIVERSITY OF CALIFORNIA, LOS ANGELES

SELNA, LAURENCE G, AND BRESLER, B B; COLLABORATIVE STRUC-



TURAL ENGINEERING STUDIES OF THE FEBRUARY 9, 1911 SAN FERNANDO EARTHQUAKE (1049931 001); 18 MONTHS \$78,000

DUKE, C MARTIN, AND MAL, ASIT, EFFECTS OF SITE AND SOURCE ON GROUND MOTIONS IN THE SAN FERNANDO EARTHQUAKE (1049932 001); 12 MONTHS \$84,700

KNOPOPF, LEON; STOCHASTIC SEISMOLOGY (1011417): 24 MONTHS

\$60,000

LEE, KENNETH L, AND DUKE, C MARTIN; INSTRUMENTATION FOR SEISMIC EARTHPRESSURE MEASUREMENT (IGJATES); 2 MONTHS \$10,000 HART, QARY C; CLUSTERED HIGH-RISE BUILDING RESPONSE DUR-ING THE SAN FERNANDO EARTHQUAKE AND ONE OF ITS AF-TERSHOCKS (IGJSES); 12 MONTHS \$23,800

UNIVERSITY OF CALIFORNIA, RIVERSIDE

DAVID, F N; FOREST FIRE STATISTICAL PROBLEMS (1051891 X00); 12 MONTHS \$61,700

UNIVERSITY OF CALIFORNIA, BAN DIEGO

WILLIAMS, FORMAN A, AND LIBBY, PAUL A; FIRE PROPAGATION ALONG SOLID SURFACES (1634711); 18 MONTHS \$53,500

STANFORD UNIVERSITY-SCHOOL OF MEDICINE

FAIRBANK, WILLIAM M, OPFER, JAMES E, AND HARRISON, DONALD C; SUPERCONDUCTING MAGNETOMETRY FOR DETECTION OF HEART DISEASE (IGJ1778): 18 MONTHS \$149,800

ATOMIC ENERGY COMMISSION-SAN FRANCISCO OPERATIONS OFFICE-ARC

HADEISHI, TETSUO; ISOTOPE-SHIFT ZEEMAN ABSORPTION SPEC-TROMETER (AGOOSS); 12 MONTHS \$125,000

#### COLORADO

COLORADO SCHOOL OF MINES

KELLER, G. V., AND GRÖSE, L. T; HYDROTHERMAL SYSTEMS AT KILAUSA VOLCANO, HAWAH (IGUISI); 12 MONTHS \$462,500 UNIVERSITY OF DENVER

HEWITT, JACK G: FACTORS AFFECTING FLY ASH RESISTIVITY AND VOLTAGE BREAKDOWN IN ELECTROSTATIC PRECIPITATORS UGMIO X00); 12 MONTHS \$48,400

BUREAU OF RECLAMATION-ENGINEERING AND RESEARCH CENTER-DENVER

ISRAELSEN, O ALLEN; SUPPORT OF U.S. NATIONAL COMMITTEE ON TUNNELING TECHNOLOGY (AGOOST), 12 MONTHS \$2,500

## DELAWARE

UNIVERSITY OF DELAWARE

BOER, KARL W; DIRECT SOLAR ENERGY CONVERSION FOR LARGE SCALE TERRESTRIAL USE (1051878), 18 MONTHS \$251,200

KWART, HAROLD; UNDERTAKE INVESTIGATIONS OF PROCEDURES FOR DESULFURIZATION OF FOSSIL FUELS (1031961); 18 MONTHS \$49,700

## DISTRICT OF COLUMBIA

NONE; OTHER PROGRAM AWARDS (ORAWDS): \$8,032

HITTMAN ASSOCIATES INC

HARVEY, DOUGLAS G; STUDY OF MINIMIZATION OF ENERGY CON-SUMPTION IN MULTI-FAMILY DWELLINGS (CA60000 001); 18 MONTHS 187800

NATIONAL ACADEMY OF ENGINEERING LINDER, CLARENCE H; POWER PLANT SITING FORUM (C\$10404 005); 8 MONTHS \$11,500

OFFICE OF SCIENCE & TECHNOLOGY

WEINHOLD, J FREDERICK; COMPLETION OF O.S.T. ENERGY REFERENCE PROJECTIONS (CA00078); 6 MONTHS \$85,900

NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL CLIFFE, ROBERT A; COMMITTEE ON FIRE RESEARCH (CJ10046 010);

12 MONTHS \$19,500
BOVE, ALBERT N: ADVISORY CONFERENCE ON EXCAVATION

BOVE, ALBERT N; ADVISORY CONFERENCE ON EXCAVATION TECHNOLOGY (C#10#0); 4 MONTHS \$5,000

DILLON, ROBERT M; FINAL STUDY PERIOD OF THE BRABINEW HAVEN ONSITE SOLID WASTE RESEARCH PROGRAM (CJ10110): 12 MONTHS \$140,100

## GEORGIA

GEORGIA INSTITUTE OF TECHNOLOGY

WULFF, WOLFGANG, AND ZUBER, NOVAK; FLAMMABLE FABRICS (1651887); 12 MONTHS \$79,000

#### HAWAII

UNIVERSITY OF HAWAII

YUEN, PAUL C, NAJITA, KAZUTOSHI, AND FURUMOTO, AUGUSTINE; AN ENGINEERING FEASIBILITY STUDY OF AN IONOSPHERIC TECHNIQUE TO IMPROVE TSUNAMI WARNING SYSTEMS (1044975); 24 MONTHS \$115.500

#### HUNOIS

ILLINOIS INSTITUTE OF TECHNOLOGY

THAU, STEPHEN A; STUDIES OF STRESS WAVE SCATTERINGS BY STRUCTURAL ELEMENTS IN AN ELASTIC HALF-SPACE REPRESENT-ING SEISMIC WAVE-FOUNDATION INTERACTIONS (1014721); 24 MONTHS \$85,100

NORTHWESTERN UNIVERSITY

VAN NESS, JAMES E; LARGE SCALE DYNAMIC SYSTEMS (KOJJ880°); 24 MONTHS \$40,000

UNIVERSITY OF ILLINOIS AT URBANA

SOZEN, METE, AND NEWMARK, N M; THE EVALUATION OF STRUC-TURAL DAMAGE CAUSED BY THE SAN FERNANDO EARTHQUAKE (1971) TOWARD THE DEVELOPMENT OF IMPROVED METHODS FOR EARTHQUAKE-RESISTANT DESIGN (1019981, 001), 12 MONTHS \$122,000

SOZEN, METE A; INVESTIGATION OF THE EFFECT OF EARTHQUAKE MOTIONS ON REINFORCED CONCRETE BUILDINGS (1040740 X00); 18 MONTHS \$79,900

ACKERMANN, WILLIAM C; CONFERENCE ON WASTE HEAT TRANSFER FROM LARGER SOURCES (1030071); 6 MONTHS \$18,000 HENDRON, ALFRED J; TUNNEL AND TUNNEL LINING BEHAVIOR (103341 X00); 18 MONTHS \$89,500

ATOMIC ENERGY COMMISSION-CHICAGO OPERATIONS OFFICE AEC
CAIRNS, ELTON J; RESEARCH AND DEVELOPMENT ON LITHIUMISULFUR SECONDARY BATTERIES (AGOSJA); 12 MONTHS \$500,000

#### INDIANA

PURDUE UNIVERSITY

KRAUSE, PAUL C; ON LINE TRANSIENT CONTROL OF POWER SYSTEMS (1032603 X00), 12 MONTHS \$238,100

JUDD, WILLIAM R, DEWITT, D P, AND WEST, T R; PROPERTIES OF GEOLOGICAL SUBSTANCES (1034808 X00); 12 MONTHS \$112,500

EMERY, ALDEN H; ENSYMATIC METHODS OF MAKING FRUCTOSE (1634)19); 12 MONTHS \$111,100

WILLIAMS, THEODORE J; SYSTEMS ENGINEERING OF COMPUTER CONTROL SYSTEMS FOR LARGE INDUSTRIAL COMPLEXES (1054965); 12 MONTHS \$30,000

PRITSKER, A ALAN B; SELF-CONTAINED BUILDING CONCEPTS AND ANALYSIS (1034078); 12 NONTHS \$100,500

#### **IOWA**

IOWA STATE UNIVERSITY OF SCIENCE & TECHNOLOGY

TRAO, GEORGE T; PRODUCTION OF SUGAR MIXTURES FROM STARCH WITH THREE NATIVE AND INSOLUBILIZED ENEYMES (101493); 12 MONTHS 865,500

## LOUISIANA

LOUISIANA STATE UNIVERSITY, NEW ORLEANS

GUILBAULT, GEORGE G; USE OF IMMOBILIZED ENZYME SYSTEMS IN ENVIRONMENTAL STUDIES (1032003); 24 MONTHS \$49,100

TULANE UNIVERSITY

CHAMBERS, ROBERT P. AND COHEN, WILLIAM; ENSYME SNGINEER-ING-INSOLUBILIZED ENSYMES AND MULTIENEYME SYSTEMS (IGJ(871); 12 MONTHS \$53,000

#### MARYLAND

ATOMIC BNERGY COMMISSION

HENDRIE, J M; SUPERCONDUCTING ELECTRICAL POWER TRANS-MISSION STUDIES (AGOODS: 00.1); 2 MONTHS \$20,000

FORSYTH, E B, AND HENDRIE, J M; SUPERCONDUCTING ELECTRI-CAL POWER TRANSMISSION SYSTEM (AGOODS): 12 MONTHS \$530,000

JOHNS HOPKING UNIVERSITY

PRISTROM, ROBERT M; FIRE PROBLEMS RESEARCH AND SYNTHESIS (1014/14 X00); 12 MONTHS \$325,000

NATIONAL BURBAU OF STANDARDS

WRIGHT, RICHARD, AND KRAMER, SAMUEL; BUILDING PRACTICES FOR DISASTER MITIGATION (CA16000); 6 MONTHS \$140,000

UNIVERSITY OF MARYLAND, COLLEGE PARK

MORSE, FREDERICK H; SOLAR ENERGY PANEL (ISSESS); 6 MONTHS \$59,800

MARTIN COMPANY-RIAS DIVISION

WESTWOOD, A R C, AND OZOL, M A; ENVIRONMENT-ENHANCED DIS-INTERGRATION OF HARD ROCKS (C145000); 12 MONTHS \$47,000

#### MASSACHUSETTS

BOSTON COLLEGE

MARRIDES, A C. AND RUSSELL, IRVING J; IMMOBILIZED ENZYMES



ON ELECTRONICALLY CONDUCTING CARRIERS (ICHIEI): 24 MONTHS \$47,400

PANG, P H; LOW-COST SILICON PHOTOVOLTAIC CELLS FOR LARGE SOLAR POWER SYSTEMS (1034975); 12 MONTHS \$58,200

#### HARVARD INIVERSITY

BMMONS, HOWARD W; COMBUSTION RESEARCH (1030857); 24 MONTHS \$151.200

PRESTON, WILLIAM M, WILSON, RICHARD, AND BJARNGARD, BENGT 2; APPLICATIONS OF PROTON RADIATION CANCER THERAPY (101899) X00): 12 MONTHS \$88,800

EMMONS, HOWARD W, AND FRIEDMAN, RAYMOND; THE HOME FIRE PROJECT (1031734 X00); 12 MONTHS \$296,800

#### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

MONTGOMERY, D BRUCE; CONTROL OF HIGH VOLTAGE DISCHARGES IN VACUUM INSULATED CRYOCABLES (C#70001): 12 MONTHS \$165,000 COHEN, DAVID; MAGNETIC FIELDS PRODUCED BY STEADY CUR-RENES IN HUMAN AND ANIMAL BODIES (C410001); 36 MONTHS \$106,000

KOLM, HENRY H, AND THORNTON, RICHARD D, MAGNEPLANE (C670003); \$ MONTHS \$210,000

MONTGOMERY, D BRUCE; A SUPERCONDUCTING MAGNET FOR IN-TRAVASCULAR NAVIGATION (C470001): 12 MONTHS \$92,800

KOLM, HENRY H, AND MAXWELL, EMANUEL; MINES PROCESSING AND WATER TREATMENT (C670005), TMONTHS \$145,000 MINERAL

MILLER, CHARLES L; URBAN GEOMETRICS - RAPID PROCESSING OF URBAN INFORMATION (IORSER XOI); 12 MONTHS \$168,900

WHITMAN, ROBERT V. AND BIGGS, JOHN M; OPTIMUM SEISMIC PRO-TECTION FOR NEW BUILDING CONSTRUCTION IN EASTERN METROPOLITAN AREAS (1047935 X01); 12 MONTHS \$138,200

WHITMAN, ROBERT V; SYSTEMATIC DOCUMENTATION AND ANALY-SIS OF DAMAGE TO HIGH RISE BUILDINGS DURING EARTHQUAKE OF 9 FEBRUARY 1971 IN LOS ANGELES (1099934 001); 12 MONTHS \$102,400

WILLIAMS, G C; FLAMMABILITY AND BURN POTENTIAL OF FABRICS (10\$1\$\$1); 12 MONTHS \$56,800

KIRTLEY, JAMES L JR; RESEARCH INITIATION - END TURN INSULA-TION FOR HIGH VOLTAGE AIR CORE ALTERNATORS (IOSE722); 18 MONTHS \$16,000

WHITE, DAVID C; DYNAMICS OF ENERGY SYSTEMS (1031874); 12 MONTHS \$198,600

MCGARRY, F J; A MODEL FOR SYSTEMS ANALYSIS OF TUNNELLING AND EXCAVATION (1014019); 12 MONTHS \$98,700

WANG, DANIEL I C: ENZYME SYSTEMS AND TECHNOLOGY FOR LARGE-SCALE SYNTHESIS (IOJ481): 12 MONTHS \$376,400

WILSON, GERALD L; PHYSICAL PROCESSES IN CONTAMINATION FLASHOVER OF HIGH-VOLTAGE INSULATORS (1011781 X00); 12 MONTHS \$61,200

WHITE, DAVID C; ANALYTICAL TOOLS AND MODELING STUDIES FOR THE GAS INDUSTRY (IOS 1836); 12 MONTHS \$256,600

CRANDALL, STEPHEN H, AND WILLIAMS, JAMES H JR; EARTHQUAKE ISOLATION OF STRUCTURES BY DUCTILE METAL FOUNDATION PADS (1031445); 12 MONTHS \$42,700

MOORADIAN, ARAM, AND KELLEY, PAUL L; DEVELOPMENT OF TURNABLE SEMI-CONDUCTOR LASERS FOR APPLICATION TO AIR POLLUTION MEASUREMENTS (1031990); 18 MONTHS \$221,000

## UNIVERSITY OF MASSACHUSETTS, AMHERST

MIDDLEMAN, STANLEY, AND RHA, CHOKYUN; DEVELOPMENT OF PROTEIN FIBER AS AN ENGINEERING MATERIAL (10) 1897); 12 MONTHS \$30,300

LAURENCE, R L, KITTRELL, J R, AND HULTIN, H O; STUDIES OF A CATALYTIC REACTOR USING AN IMMOBILIZED MULTI-ENSYME SYSTEM (1014976); 12 MONTHS \$99,100

HERONEMUS, WILLIAM E; OCEAN SITED POWER PLANTS (1034976); 18 MONTHS \$145,100

## WORCESTER POLYTECHNIC INSTITUTE

CLEMENTS, KEVIN A; RESEARCH INITIATION - DYNAMIC STATE ESTIMATION APPLIED TO ELECTRIC POWER SYSTEMS (1019781); 18 MONTHS \$20,000

## MICHIGAN

## UNIVERSITY OF MICHIGAN

STREETER, VICTOR L, AND WYLIE, E BENJAMIN; EARTHQUAKE IN-DUCED TRANSIENT PORE PRESSURES IN EARTH DAMS (101771); 24 MONTHS \$143,600

## WAYNE STATE UNIVERSITY

MEISEL, JEROME, AND BARNARD, ROBERT; DYNAMIC TRANSIENT CONTROL OF BULK INTERCONNECTED ELECTRIC POWER SYSTEMS (1014977 X00); 12 MONTHS \$35,600

## MINNESOTA

## UNIVERSITY OF MINNESOTA

FREDRICKSON, A G, AND TSUCHIYA, & M; DYNAMICS OF INTERACT-ING MICROBIAL POPULATIONS (IO28874 X01); 12 MONTHS \$51,000

FAIRHURST, CHARLES; ROCK-TUNNEL LINING INTERACTION (1033145); 18 MONTHS \$133,100

JORDAN, R C; RESEARCH APPLIED TO SOLAR-THERMAL POWER SYSTEMS (101411 X00); 18 MONTHS \$145,600

#### MISSOURI

#### CANCER RESEARCH CENTER

BROWN, HARRY D; NONAQUEOUS SYNTHESIS OF A MATRIX-SUP-PORTED ENZYME (IOJATTS): 24 MONTHS \$56,000

## UNIVERSITY OF MISSOURI, COLUMBIA

OTT, GRANVILLE E; DIGITAL COMPUTER CONTROL OF ELECTRICAL POWER SYSTEM SUBSTATIONS (losetes XOO); 12 MONTHS \$66,200

HOFT, RICHARD G, AND SLIVINSKY, CHARLES R; SOLID STATE POWER CONTROL STABILITY ANALYSIS USING METHODS OF LIAPU-NOV AND POPOV (KOJ 1970 X00); 12 MONTHS \$50,200

## UNIVERSITY OF MISSOURI, ROLLA

CHENG, FRANKLIN Y, DYNAMIC INSTABILITY AND ULTIMATE CAPACITY OF INELASTIC SYSTEMS PARAMETRICALLY EXCITED BY EARTHQUAKES (1034946); 15 MONTHS \$20,300

#### WASHINGTON UNIVERSITY

ZABORSZKY, JOHN; STUDIES OF PRINCIPLES FOR THE ALL DIGITALLY CONTROLLED AND OPERATED POWER SYSTEM (101404) X00); 15 MONTHS \$61,000

## MONTANA

## UNIVERSITY OF MONTANA

SHAFIZADEH, FRED; CHEMISTRY OF CELLULOSIC FIRES (IOSSELS X00); 12 MONTHS \$83,700

#### NEVADA

## UNIVERSITY OF NEVADA, REPO

DOUGLAS, BRUCE M; A PROPOSAL FOR STRONG MOTION EARTHQUAKE INSTRUMENTATION FOR RENO, SPARKS, AND TRUCKEE MEADOWS, NEVADA (1032369); 12 MONTHS \$36,400

#### **NEW HAMPSHIRE**

#### DARTMOUTH COLLEGE

RAGONE, DAVID Y; A PRELIMINARY SURVEY OF EMISSION CON-TROL TECHNOLOGY FOR COALFIRED ELECTRIC GENERATING PLANTS (1034189); 4 MONTHS 412,000

## **NEW JERSEY**

#### PRINCETON UNIVERSITY

OLASSMAN, IRVIN; FLAME SPREADING ACROSS LIQUID FUELS (1032551 X00); 12 MONTHS \$65,000

SOCOLOW, ROBERT H, AND GROT, RICHARD A; ENERGY CONSERVA-TION IN HOUSING (IGSLOSD): 18 MONTHS \$143,600

## **BUTGERS UNIVERSITY**

ANDERSON, WAYNE A; AN IMPROVED SCHOTTKY BARRIER PHOTOVOLTAIC DIODE FOR SOLAR ENERGY CONVERSION (1032726); 18 MONTHS \$16,000

CONSTANTINIDES, A; MULTISTAGE ENZYMATIC CONVERSION OF GLUCOSE TO GLUCONIC ACID (los 4016); 18 MONTHS \$31,900

CONSTANTINIDES, ALKIS, AND GILBERT, SEYMOUR; USE OF IMMO-BILIZED ENZYMES IN FOOD PROCESSING, WASTE TREATMENT AND PHARMACEUTICAL PREPARATIONS (ICM 4287); 12 MONTHS \$192,300

ROBERTS, FRED S; SIGNED DIGRAPHS AND THEIR APPLICATIONS TO PROBLEMS OF SOCIETY (IOS 4885); 24 MONTHS \$35,800

## NEW WEXICO

## LOS ALAMOS SCIENTIFIC LABORATORY

ROWLEY, JOHN C; INITIAL DEVELOPMENT OF A NEW TUNNELING AND EXCAVATION TECHNOLOGY BASED ON ROCK-MELTING (AGOOST); 6 MONTHS \$145,000

## NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY

REITER, MARSHALL A; INVESTIGATION OF THE THERMAL REGIME OF THE RIO GRANDE RIFT SYSTEM OF NEW MEXICO (1019148); 24 MONTHS \$24,900

## **NEW YORK**

## AMERICAN SOCIETY OF CIVIL ENGINEERS

WISELY, WILLIAM H; EFFECTIVENESS OF UNDERGROUND CON-STRUCTION (1030080 001); 6 MONTHS \$39,400

TAYLOR, DONALD C; EVALUATION OF CURRENT METHODS OF STRUCTURAL DYNAMICS ANALYSIS USING NUCLEAR-INDUCED TRANSIENT EXCITATION (KOSJ674°); 12 MONTHS \$36,900

## CITY COLLEGE

SQUIRES, ARTHUR M; STUDIES TOWARD IMPROVING TECHNIQUES FOR GASIFYING COAL (1034886); 18 MONTHS \$644,400

## CLARKSON COLLEGE OF TECHNOLOGY

HAMMAM, M S A A; STUDY OF MULTI COMPUTER CONTROL OF SYSTEM VOLTAGE AND REACTIVE POWER ON REAL-TIME BASIS (1034894 X00); 12 MONTHS \$32,900



## . COLUMBIA UNIVERSITY

GREGOR, HARRY P: STABILIZED ENEYME - HOLLOW FIBER SYSTEMS (1014141); 24 MONTHS \$99,800

BCHULZ, HBLMUT W; STUDIES ON SYSTEMS FOR THE NON-POLLUT-ING DISPOSAL AND ECONOMIC UTILIZATION OF SOLID WASTE (1014409): 12 MONTHS \$49,700

## COZNELL UNIVERSITY

AUER, P L, AND COMAR, C L; NATIONAL ENERGY NEEDS AND EN-VIRONMENTAL QUALITY (10222003 X00), 12 MONTHS \$338,300 COMAR, C L, AND AUER, P L; NATIONAL ENERGY NEEDS AND EN-

VIRONMENTAL QUALITY (1019003 X01); 12 MONTHS \$363,700
TORRANCE, KENNETH E; FLAME SPREAD OVER LIQUID FUEL (1031894 X00), 12 MONTHS \$50,500

LODAHL, THOMAS M: WORKSHOP ON ENERGY AND THE ENVIRON-MENT (JOSES 10), & MONTHS ESR 130

MOORE, FRANKLIN K; RESEARCH ON HEAT REJECTION SYSTEMS (1031778); 18 MONTHS \$85,400

EDWARDS, VICTOR H: CHEMICAL REACTION ENGINEERING WITH INSOLUBILIZED ENZYMES (IOSMIS); 9 MONTHS \$19,000

## NEW YORK UNIVERSITY

BECHERT, THOMAS E; RESEARCH INITIATION - DYNAMIC OPTIMAL CONTROL OF ELECTRIC POWER GENERATIONS (1011145); 18 MONTHS \$16,000

BECHERT, THOMAS E; DYNAMIC OPTIMAL CONTROL OF ELECTRIC

BECHERT, THOMAS E. DINAMIC OPTIMAL CONTROL OF BLBCIRIC POWER GENERATIONS (1642725 001); 18 MONTHS 18,100
NETZER, DICK, AND HANSEN, WILLARD, ELECTRIC ENERGY SUPPLY IN THE NEW YORK AREA-ECONOMIC DEVELOPMENT AND FOLITICAL DECISION-MAKING PROCESS (1651888 X00); 12 MONTHS

## STATE UNIVERSITY AT BUPPALO

RAY, W HARMON, AND SZEKELY, JULIAN; MODELLING AND OP-TIMIBATION OF THE IRONMAKING-STEELMAKING OPERATIONAL SEQUENCE (1654646); 12 MONTHS \$49,400

## UNITED ENGINEERING TRUSTERS

ZECCA, JOHN A, AND PINK, L H; CONTROL STRATEGIES FOR POWER SYSTEMS (1014506): 12 MONTHS \$10,500 DUNLOP, DONALD D; ENERGY RESEARCH PRIORITIES (1014108); 12

MONTHS \$10,800

KATZ, DONALD L; ENERGY TECHNOLOGIES FOR THE FUTURE (IOSLIGS); 12 MONTHS \$20,000

## COLUMBIA UNIVERSITY-LAMONT-DOHERTY GEOLOGICAL **OBSERVATORY**

TRIFUNAC, MIHAILO D; INVESTIGATION OF STRONG EARTHQUAKE GROUND MOTION (1031788); 24 MONTHS \$102,300

## NEW YORK UNIVERSITY-UNIVERSITY HEIGHTS CENTER

FERRI, ANTONIO, AND HOYDYSH, WALTER G; AERODYNAMIC AND ENVIRONMENTAL EFFECTS OF MODULAR STRUCTURAL PLACEMENT (JOSA77A): 24 MONTHS \$130,800

## **NORTH CAROLINA**

## BAST CAROLINA UNIVERSITY

PENNINGTON, SAM N; A MATRIX-SUPPORTED ENZYME THERMAL PROBE FOR CHEMICAL ANALYSES (1034367), 24 MONTHS \$17,500

## OHIO

## OHIO STATE UNIVERSITY

ROYER, GARFIELD P; APPLICATIONS OF IMMOBILIZED ENZYMES TO THE TREATMENT AND UTILIZATION OF FOOD PLANT WASTES (1031141); 24 MONTHS \$127,800

## CASE WESTERN RESERVE UNIVERSITY-SCHOOL OF MEDICINE

KRAMPITZ, LO; HYDROGEN PRODUCTION BY PHOTOSYNTHESIS AND HYDROGENASE ACTIVITY - AN ENERGY SOURCE (1031991 X00); 18 MONTHS \$150,000

## OREGON

## UNIVERSITY OF OREGON - EUGENE

DONNELLY, RUSSELL J; APPLICATIONS OF CRYOGENIC TECHNIQUES TO PROBLEMS IN AIR POLLUTION (1033017 X00): 12 MONTHS \$142 000

## PENNSYLVANIA

## COMBUSTION INSTITUTE

WILLIAMS, GLENN C; FOURTEENTH SYMPOSIUM (INTERNATIONAL) ON COMBUSTION (Kalifile): 12 MONTHS \$5,000

## PENNSYLVANIA STATE UNIVERSITY

DEWALLE, DAVID R; AGRO-POWER-WASTE WATER COMPLEX (J035100); 18 MONTHS \$75,000

## UNIVERSITY OF PENNSYLVANIA

HUMPHREY, ARTHUR E, PERLMUTTER, DANIEL D, CHEN, MICHAEL S K, AND GRAVES, DAVID J; ENZYME SYSTEMS AND THEIR PRACTI-CAL UTILIZATION (IOSESSE XOO); 12 MONTHS \$271,500

HUMPHREY, ARTHUR E; ENZYME SYSTEMS AND THEIR PRACTICAL UTILIZATION (INTER KOIK 12 MONTHS 12,900 GRAVES, DAVID J. RESEARCH INITIATION PURIFICATION AND CON-

CENTRATION BY SELECTIVE COMPLEXING (IGNITAR); 18 MONTHS \$16,000 ZANDI, IRAJ; TECHNOLOGY FOR THE CONVERSION OF SOLAR ENER. GY TO FUEL GAS (los (901); 12 MONTHS \$195,000

#### RHODE ISLAND

#### BROWN UNIVERSITY

SIBULKIN, MERWIN; FLAME SPREADING OVER SOLID SURFACES (1031883 X00); 12 MONTHS \$33,400

#### TENNESSEE

## OAK RIDGE NATIONAL LABORATORY

LIVERNAN, JAMES L; ELECTRICAL ENERGY AND ITS ENVIRONMEN. TAL IMPACT (AGOOSES); 12 MONTHS \$493,100

ATOMIC ENERGY COMMISSION-OAK RIDGE OPERATIONS OFFICE-AEC LIVERNAN, J L, AND FRAAS, ARTHUR P; POTASSIUM-STEAM BINARY VAPOR CYCLE (AGOOSES); 12 MONTHS \$360,000

## UNIVERSITY OF UTAH

EINHORN, IRVING N; THE PHYSIOLOGICAL AND TOXICOLOGICAL ASPECTS OF SMOKE PRODUCED DURING THE COMBUSTION OF POLYMERIC MATERIALS (1034650); 12 MONTHS \$139,000

CUTLER, IVAN B; REFRACTORY MATERIALS FOR COAL FUELED M.H.D. POWER GENERATION (103 (983)); 12 MONTHS \$81,200

## INTERTECHNOLOGY CORPORATION

SZEGO, G C; CONTRACT FOR A SYSTEMATIC ANALYSIS OF THE ENERGY PROBLEM WITHIN THE UNITED STATES (C4,3000 001); 3 MONTHS \$83,419

SZEGO, G C; CONTRACT FOR A SYSTEMATIC ANALYSIS OF THE ENERGY PROBLEM WITHIN THE UNITED STATES (COLSOOD GOS); 1 MONTHS \$40,000

## UNIVERSITY OF VIRGINIA

KIRWAN, DONALD J; ENZYMATIC AND ELECTROCHEMICAL DESTRUCTION OF VIRUSES (1034778): 12 MONTHS 459,700

#### WASHINGTON

## UNIVERSITY OF WASHINGTON

HENNES, ROBERT C, AND BOSTROM, ROBERT C; DYNAMIC STABILI-TY OF BARTH STRUCTURES (1034780); 24 MONTHS \$145,900

HERNANDEZ, E NORMAN; DEVELOPMENT OF MULTI-COLOR HIGH RESOLUTION DISTANCE MEASURING INSTRUMENTS (1031934); 12 MONTHS \$245,700

HENNES, R G; INTERNATIONAL CONFERENCE ON MICROZONATION (Kosssit\*): 12 MONTHS \$33,000

## WIST VIRGINIA

## WEST VIRGINIA UNIVERSITY

BYRD, JACK JR; RESEARCH INITIATION - DEVELOPMENT OF AN IN-TERACTIVE SIMULATION MODEL TO OBTAIN ENERGY DECISION MAKER PROFILES (1032784); 18 MONTHS \$20,000

## UNIVERSITY OF WISCONSIN, MADISON

DUFFIE, J A, AND BECKMAN, W A; COMPUTER MODELING AND SIMULATION OF SOLAR HEATING AND COOLING SYSTEMS (1034088); 18 MONTHS \$75,000

## **ENVIRONMENTAL SYSTEMS AND RESOURCES**

## **ARIZONA**

## MUSEUM OF NORTHERN ARIZONA

WALTHER, ERIC O; COLLABORATIVE RESEARCH ON THE CON-SEQUENCES OF WATER MANAGEMENT AND RELATED ACTIVITIES IN THE LAKE POWELL REGION (IOS 1818); 12 MONTHS \$60,900

## UNIVERSITY OF ARIZONA

LEVY, JERROLD E; COLLABORATIVE RESEARCH ON THE CON-SEQUENCES OF WATER MANAGEMENT AND RELATED ACTIVITIES IN THE LAKE POWELL REGION (1034832); 12 MONTHS \$87,500

## JOHN MUIR INST FOR ENVIRONMENTAL STUDIES INC

AITKEN, DONALD W, AND BEN-DAVID, SHAUL; COLLABORATIVE RESEARCH ON THE CONSEQUENCES OF WATER MANAGEMENT AND RELATED ACTIVITIES IN THE LAKE POWELL REGION (1051881); 12 MONTHS \$100,800



## STANFORD RESEARCH INSTITUTE

HOPKINS, GEORGE D: TECHNOLOGY ASSESSMENT OF WINTER ORO-GRAPHIC SNOWPACK AUGMENTATION IN THE UPPER COLORADO RIYER BASIN (C41000 008); 4 MONTHS \$2,500

HOPKINS, GEORGE D; EXTENSION OF STUDY OF TECHNOLOGY AS-SESSMENT OF WINTER OROGRAPHIC SNOWPACK AUGMENTATION IN THE UPPER COLORADO RIVER BASIN (C411000 001); 1 MONTHS \$29,000

UTHE, EDWARD E; METROMEX ABROSOL AND RADIATION EXPERI-MENT (1631176): 18 MONTHS 848 400

#### STANFORD UNIVERSITY

PARKS, GEORGE A: TRACE ELEMENTS IN WATER- ORIGIN, FATE, AND CONTROL (1092913): 18 MONTHS \$210,000

## UNIVERSITY OF CALIFORNIA, DAVIS

GOLDMAN, CHARLES B: A RESEARCH PROGRAM IN THE LAKE TAHOE BASIN (1000000 001); 18 MONTHS \$561,100

WATT, KENNETH E F. AND BREWER, JOHN; LAND USE AND ENERGY PLOW IN HUMAN SOCIETY (1000017 101): 12 MONTHS \$364800

## University of California, los angeles

ANDERSON, ORSON L; COLLABORATIVE RESEARCH ON ASSESSMENT OF MAN'S ACTIVITIES ON THE LAKE POWELL REGION (108\$48\$ 001); 8 MONTHS \$2250

PERLOFF, HARVEY S; WORKSHOP/CONFERENCE ON RESEARCH NBEDS FOR LAND-USE PLANNING (1051146); 6 MONTHS \$11,000

PERLOFF, HARVEY S; WORKSHIP/CONFERENCE ON RESEARCH NEEDS FOR PLANNING DEVELOPMENT AND MANAGEMENT OF OUR PHYSICAL ENVIRONMENTS (1010101); 8 MONTHS \$74,100

PRICE: MONROE: COLLABORATIVE RESEARCH ON THE CON-SEQUENCES OF WATER MANAGEMENT AND RELATED ACTIVITIES IN THE LAKE POWELL REGION (1614313); 12 MONTHS \$49,300

ANDERSON, ORSON L: COLLABORATIVE RESEARCH ON THE CON-SEQUENCES OF WATER MANAGEMENT AND RELATED ACTIVITIES IN THE LAKE POWELL REGION (1014835): 12 MONTHS \$53,400

ANDERSON. ORSON L; COLLABORATIVE RESEARCH ON THE CON-SEQUENCES OF WATER MANAGEMENT AND RELATED ACTIVITIES IN THE LAKE POWELL REGION (1031410); 12 MONTHS \$78,300

## UNIVERSITY OF CALIFORNIA, RIVERSIDE

PRATT, P F; NITRATE IN EFFLUENTS FROM IRRIGATED LANDS (1034743 X00); 12 MONTHS \$590.450

## COLORADO

## COLORADO STALE UNIVERSITY

GRANT, LEWIS O; PRECIPITATION AUGMENTATION FROM ORO-GRAPHIC CLOUDS (1031460); 12 MONTHS \$283,400

GRANT, LEWIS O, AND CORPIN, MYRON L; LABORATORY CLOUD SIMULATION TO SUPPORT WEATHER MODIFICATION RESEARCH AND FIELD PROGRAMS (10388), X00): 12 MONTHS \$106,800

JAMESON, DONALD A; REGIONAL ANALYSIS OF GRASSLAND EN-VIRONMENTAL SYSTEMS (1014170); 18 MONTHS \$250,300

EDWARDS, HARRY W; IMPACT ON MAN OF ENVIRONMENTAL CONTAMINATION CAUSED BY LEAD (IOSISIS X00); 12 MONTHS \$447,200

## NATIONAL CENTER FOR ATMOSPHERIC RESEARCH

FIROR, JOHN W; CONTRACT FOR THE MANAGEMENT, OPERATION, AND MAINTENANCE OF THE NATIONAL CENTER FOR ATMOSPHERIC RESEARCH, BOULDER, COLORADO (C480000 003); 12 MONTHS \$1,810,000 FIROR, JOHN W; NATIONAL HAIL RESEARCH EXPERIMENT (C480000

006), 12 MONTHS \$560,000

## UNIVERSITY OF COLORADO

CHAPPELL, WILLARD R, AND JORDEN, ROGER; TRANSPORT AND THE BIOLOGICAL EFFECTS OF MOLYBDENUM IN THE ENVIRONMENT (1031914 X00); 12 MONTHS \$290,000

## UNIVERSITY OF DENVER

UPDEGRAFF, DAVID M; THE BIODEGRADABILITY AND ECOLOGICAL EFFECTS OF ORGANIC WEATHER MODIFICATION AGENTS (1031037); 12 MONTHS \$29,100

SCHMIDT-COLLERUS, JOSEF J; THE DISPOSAL AND ENVIRONMENTAL EFFECTS OF CARBONACEOUS SOLID WASTES FROM COMMERCIAL OIL SHALE OPERATIONS (1031888 X00); 12 MONTHS \$96,200

## DELAWARE

## UNIVERSITY OF DELAWARE

WHIPPLE, WM JR, AND PATRICK, RUTH; THE DELAWARE ESTUARY SYSTEM, ENVIRONMENTAL IMPACTS AND SOCIO-ECONOMIC EFFECTS (103348): 18 MONTHS \$370,000

## DISTRICT OF COLUMBIA

## ASSOCIATED COLLEGIATE SCHOOLS OF ARCHITECTURE

BURCHARD, CHARLES; A RESEARCH WORKSHOP FOR ENVIRON-MENTAL DESIGN FACULTY (1031658); 6 MONTHS \$17,900

## DEPARTMENT OF AGRICULTURE

BOONE, LARRY M; BCONOMIC AND INSTITUTIONAL CONSIDERA-TIONS OF SUPPRESSING HAIL (AGOOTS): 12 MONTHS \$40,000

## NATIONAL ACADEMY OF SCIENCES

BOVE, ALBERT N; SUBCOMMITTEE ON THE GEOCHEMICAL EN-VIRONMENT IN RELATION TO HEALTH AND DISEASE (C110800 001); 18 MONTHS 842 600

## MOITUTITENI NAINOSHTIME

WILLIAMSON, FRANCIS S L; INTERDISCIPLINARY RESEARCH ON A WATERSHED ESTUARINE SYSTEM OF THE CHESAPEAKE BAY (MISSION); 7 MONTHS \$41,100

## DEPARTMENT OF NAVY-AIR SYSTEMS COMMAND

WILLIAMS, BEN; REPAIRS FOR T-48 AIRCRAFT NSIOMH BY NAVAL AIR REWORK FACILITY, PENSACOLA, FLORIDA (CASIOSO); 6 MONTHS \$40,600

#### PLOSIDA

#### UNIVERSITY OF SOUTH PLORIDA

BRAMAN, ROBERT 8; STUDIES OF THE MOLECULARITY AND REACTIONS OF SELECTED HEAVY METALS IN THE ENVIRONMENT (1011761 X00); 18 MONTHS \$37,500

#### GEORGIA

## COASTAL BTATES ORGANIZATION

HARGIS, WILLIAM O JR; COASTAL STATES ORGANIZATION CONFERENCE (1030328): 4 MONTHS \$3,500

## ILLINOIS

## HT RESEARCH INSTITUTE

STAKE, A M, AND ZERLAUT, G A; A FEASIBILITY STUDY OF EVAPORATION SUPPRESSANTS FOR CLOUD AND FOG MODIFICATION CAMPION 12 MONTHS \$37.100
UNIVERSITY OF CHICAGO

FUJITA, T THEODORE; BASIC RESEARCH ON TORNADOES RELE-VANT TO THEIR MODIFICATION (1050772); 24 MONTHS \$45,400

TOLLEY, GEORGE S. ENVIRONMENTAL POLLUTANTS AND THE URBAN ECONOMY (193558); 15 MONTHS \$314,700

BRAHAM, ROSCOE R JR; INADVERTENT WEATHER MODIFICATION IN THE ST. LOUIS AREA (1031313); 12 MONTHS \$190.400

#### UNIVERSITY OF ILLINOIS AT URBANA

METCALF, ROBERT L, AND EWING, BEN B; INTERDISCIPLINARY STUDY OF ENVIRONMENTAL POLLUTION BY LEAD (1000026 001); 1 MONTHS \$18,000

LAITINEN, H A; AN INTERDISCIPLINARY STUDY OF ENVIRONMENTAL POLLUTION BY LEAD AND OTHER METALS (1091603); 18 MONTHS 1960.000

CHANGNON, STANLEY A JR; FIELD STUDY OF URBAN EFFECTS ON PRECIPITATION AND SEVERE WEATHER AT ST. LOUIS (1035371); 12 MONTHS \$144,200

CHANGNON, STANLEY A JR; RESEARCH COORDINATION OF METROMEX- A STUDY OF URBAN EFFECTS ON WEATHER AND RAIN-FALL (1014197); 12 MONTHS \$55,500

ATOMIC ENERGY COMMISSION-CHICAGO OPERATIONS OFFICE-AEC

CROKE, KEVIN; ENVIRONMENTAL POLLUTANTS AND THE URBAN ECONOMY (AGOOSIS); 15 MONTHS \$230,000

## IOWA

## IOWA STATE UNIVERSITY OF SCIENCE & TECHNOLOGY

HEADY, EARL O; NATIONAL ENVIRONMENTAL MODELS OF AGRICULTURAL POLICY, LAND USE AND WATER QUALITY (1032970); 24 MONTHS \$568,700

## MARYLAND

## JOHNS HOPKINS UNIVERSITY

SELIGER, HOWARD H; INTERDISCIPLINARY RESEARCH ON A WATERSHED ESTUARINE SYSTEM OF THE CHESAPEAKE BAY (1039110); TMONTHS \$62,600

## NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION

PHILLIPS, BYRON B; SURFACE AREAL-TEMPORAL HAIL AND RAIN-FALL STUDY WITHIN THE NATIONAL HAIL RESEARCH EXPERIMENT (A000857 001); 18 MONTHS \$99,900

## UNIVERBITY OF MARYLAND, COLLEGE PARK

CORLISS, JOHN O; INTERDISCIPLINARY RESEARCH ON A WATERSHED-ESTUARINE SYSTEM OF THE CHESAPEAKE BAY (1012109); 1 MONTHS \$23.550

## MASSACHUSETTS

## BOSTON UNIVERSITY

DOWNING, DAVID R; RESEARCH INITIATION - MODELING AND



ANALYSIS OF A SALT MARSH ECOSYSTEM SUBJECTED TO NUTRIENT ADDITIONS (1011121): 18 MONTHS \$20,000

#### HARVAUD UNIVERSITY

STEINITZ. CARL F. ROGERS, PETER, AND TOTH, RICHARD; THE IN-TERACTION BETWEEN URBANIZATION AND LAND-QUALITY AND QUANTITY IN ENVIRONMENTAL PLANNING AND DESIGN (1032603); 12 MONTHS 1351300

#### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

MOORE, STEPHEN F; RESEARCH INITIATION · DATA-MODEL IN-TERACTIONS, A RATIONAL BASIS FOR WATER QUALITY MONITORING PROGRAMS (1011117); 18 MONTHS \$14,000

#### WOODS HOLE OCEANOGRAPHIC INSTITUTION

RETCHUM, BOSTWICK H; THE STUDY OF THE CRITICAL PROBLEMS OF THE COASTAL EONE (101758); 12 MONTHS \$123,800

RYTHER, JOHN H; THE USE OF FLOWING BIOLOGICAL SYSTEMS IN AQUACULTURE, SEWAGE TREATMENT, POLLUTION ASSAY, AND FOOD-CHAIN STUDIES (1098140); 24 MONTHS \$672,000

#### MICHIGAN

#### UNIVERSITY OF MICHIGAN

KOBNIG, HERMAN E: ECOSYSTEM DESIGN AND MAN. Caracter (1000010 001): 24 MONTHS \$200,000

RANEY, R KEITH; APPLICATION OF REMOTE SENSING TEC. A OLOGY TO ENVIRONMENTAL PLANNING AND PUBLIC POLICY FORMULATION (1014109 X00); 18 MONTHS \$371,600

KADLEC, JOHN A, AND KADLEC, ROBERT H: THE EFFECTS OF SEWAGE EFFLUENT ON WETLAND ECOSYSTEMS (ICHAIL X00); 12 MONTHS \$133.500

PADDOCK, MARK W; ENVIRONMENTAL IMPACT BY MAN ON NON-URBAN REGIONS UGS-6989; 18 MONTHS \$130,000

ZISSIS, GEORGE 1; ASSESSING THE IMPACT OF REMOTE SENSING OF THE ENVIRONMENT (1014110); 15 MONTHS \$141,500

#### MISSOUR

## UNIVERSITY OF MISSOURI, COLUMBIA

HEMPHILL, DELBERT D; SIXTH ANNUAL CONFERENCE ON TRACE SUBSTANCES IN ENVIRONMENTAL HEALTH GOISSOI (01); 12 MONTHS \$15,900

## **WASHINGTON UNIVERSITY**

KOHL, DANIEL H, AND COMMONER, BARRY; A STUDY OF CERTAIN ECOLOGICAL, PUBLIC HEALTH AND ECONOMIC CONSEQUENCES OF THE USE OF INORGANIC NITROGEN FERTILIZER (LOSDELE XOI); 12 MONTHS \$234,000

#### MONTANA

## MONTANA STATE UNIVERSITY

JEZESKI, JAMES J; THE IMPACT OF A LARGE RECREATIONAL DEVELOPMENT UPON A SEMI-PRIMITIVE ENVIRONMENT- A CASE STUDY (1039904 X01); 12 MONTHS \$240,000

#### NEBRASKA

## CHADRON STATE COLLEGE

STRUEMPLER, ARTHUR W; THE ANALYSIS OF SILVER IN PRECIPITATION BY THE FLAMELESS GRAPHITE FURNACE METHOD (1018550); 12 MONTHS \$12,200

## NEVADA

## DESERT RESEARCH INSTITUTE

STEELE, ROGER L; SEQUENCE EFFECTS OF HETEROGENEOUS NUCLEATION (1014007): 12 MONTHS \$69.200

## NEW HAMPSHIRE

## DARTMOUTH COLLEGE

REYNOLDS, ROBERT C, JOHNSON, NOYS M, AND DRAKE, CHARLES L; ASSESSMENT OF MAMS ACTIVITIES ON LAKE POWELL REGION (JOHN 41 001): 1 MONTHS \$1,265

JOHNSON, NOYE M. AND REYNOLDS, ROBERT; COLLABGRATIVE RESEARCH ON THE CONSEQUENCES OF WATER MANAGEMENT AND RELATED ACTIVITIES IN THE LAKE POWELL REGION (1054939); 12 MONTHS \$102,000

## DARTMOUTH COLLEGE THAY BR SCHOOL OF BUGINEERING

MEADOWS, DENNIS L; LONG-TERM NATURAL RESOURCE AVAILA-BILITY-ENVIRONMENTAL AND POLICY IMPLICATIONS IN THE U.S. (1044001 X00); 12 MONTHS \$122,000

## NEW MEXICO

NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY
MOORE, CHARLES B, COLGATE, STIRLING A, HOLMES, CHARLES R,

AND WINN, WILLIAM P; RESEARCH INTO CLOUD ELECTRIFICATION AND ITS MODIFICATION (1633)78 X00); 12 MONTHS \$188,700

## UNIVERSITY OF NEW MEXICO

POTTER, LOREN D, AND KIDD, DAVID E: COLLABORATIVE RESEARCH ON THE CONSEQUENCES OF WATER MANAGEMENT AND RELATED ACTIVITIES IN THE LAKE POWELL REGION (101411); 12 MONTHS \$146,000

#### **NEW YORK**

#### STATE UNIVERSITY AT ALBANY

CHESSIN, HENRY, AND VONNEGUT, BERNARD; DEVELOPMENT OF CLOUD SEEDING TECHNOLOGY UTILIZING MODIFIED AGI STRUC-TURES (IGHTSE): 12 MONTHS \$55,400

#### UNIVERSITY OF ROCKESTER

CLARKSON, THOMAS W; METHYL MERCURY AND RELATED COM-POUNDS AS ENVIRONMENTAL HAZARDS TO MAN (1030007 X01); \$ MONTHS \$33,000

KUNITZ, STEVEN J; COLLABORATIVE RESEARCH ON THE CON-SEQUENCES OF WATER MANAGEMENT AND RELATED ACTIVITIES IN THE LAKE POWELL REGION (1031437); 12 MONTHS \$16,000

## UNIVERSITY OF ROCHESTER-SCHOOL OF MEDICINE AND DENTISTRY

CLARKSON, THOMAS W; METHYL MERCURY AND RELATED COM-POUNDS AS ENVIRONMENTAL HABARDS TO MAN (1050007 X05); 12 MONTHS \$390,000

#### **NORTH CAROUNA**

## RESEARCH TRIANGLE INSTITUTE

VUKOVICH, FRED M; ON OPTIMUM METEOROLOGICAL AND AIR POL-LUTION SAMPLING SITE SELECTION IN URBAN AREAS (1031413); 12 MONTHS \$132.600

#### OHIO

## CASE WESTERN RESERVE UNIVERSITY

HAIMES, YACOV Y, AND MESAROVIC, MIHAJLO; MULTILEVEL AP-PROACH FOR REGIONAL WATER RESOURCE PLANNING AND MANAGEMENT (1034086); 24 MONTHS \$69,700

#### OREGON

## OREGON STATE UNIVERSITY

HEWSON, E WENDELL, AND GAY, LLOYD; DOCTORAL DISSERTATION RESEARCH IN THE ENVIRONMENTAL SCIENCES (A014745\*); 12 MONTHS \$4,000

SLOTTA, LARRY 8, BELLA, DAVID, AND SCHAUMBURG, FRANK; DREDGE SPOIL DISTRIBUTION AND ESTUARINE EFFECTS (104144); 18 MONTHS \$259,400

## PENNSYLVANIA

#### UNIVERSITY OF PITTSBURGH

OCHS, JACK; FINANCING IN SOLID WASTE MANAGEMENT DESIGN (1651648); 14 MONTHS \$25,600

## **SOUTH DAKOTA**

## South dakota behool of mines and technology

DENNIS, ARNETT S; NUMERICAL ANALYSIS OF PROPOSED HAIL SUPPRESSION CONCEPTS (A030414); 24 MONTHS \$26,300

DAVIS, BRIANT L; CHEMICAL COMPLEXING OF SILVER IODIDS-AL-KALI IODIDS ASROSOLS PREPARED FOR CLOUD SEEDING PURPOSES UOS 1804); 24 MONTHS \$103,000

## TENNESSEE

## OAK RIDGE NATIONAL LABORATORY

LIVERMAN, JAMES L; ENVIRONMENTAL QUALITY INDICES (AGOOSSO); 12 MONTHS \$100,000

LIVERMAN, JAMES L; AN ANALYSIS OF A REGIONAL ENVIRONMEN-TAL SYSTEM (AGOOSSI), 12 MONTHS \$490,000

LIVERWAN, JAMES L; INTEGRATION OF PROBLEM-ORIENTED EN-VIRONMENTAL RESEARCH (AGOODS); 12 MONTHS \$90,000

ATOMIC ENERGY COMMISSION-OAK RIDGE OPERATIONS OFFICE-AEC LIVERMAN, JAMES L; ECOLOGY AND ANALYSIS OF TRACE CONTAMI-NANTS (AGOOJSS); 12 MONTHS \$1,247,600

#### TIXAS

## SOUTHERN METHODIST UNIVERSITY

TAUBENFELD, HOWARD J; STUDY GROUP ON THE SOCIETAL CON-SEQUENCES OF WEATHER MODIFICATION (1031439 X00); 12 MONTHS 460,500

## UNIV OF TEXAS AT AUSTIN

SAGIK, BERNARD P; VIRUSES, SEWAGE AND TERRESTRIAL WASTE DISPOSAL (1031283 X00); 12 MONTHS \$147,200



FRUH, QUS; ESTABLISHMENT OF OPERATIONAL QUIDELINES FOR TEXAS COASTAL ZONE MANAGEMENT (103,1270 X00); 12 MONTHS \$239,000 UNIVERSITY OF HOUSTON

THOMPSON, RUSSELL G; NATIONAL ECONOMIC MODELS OF INDUSTRIAL WATER USE AND WASTE TREATMENT (1034459); 12 MONTHS 1848.300

#### VIRGINIA

CHESAPBAKE RESEARCH CONSORTIUM INC.

HARGIS, WILLIAM J JR; CHESAPEAKE BAY RESEARCH (1031488); 12 MONTHS \$1.499.300

VIRGINIA POLYTROUNIC INSTITUTE

WALKER, WILLIAM R; PEEP WELL DISPOSAL (IOS 1615); 18 MONTHS \$94,500

#### WASHINGTON

UNIVERSITY OF WASHINGTON

HOBBS, PETER V; RESEARCH IN CLOUD PHYSICS AND WEATHER MODIFICATION UGJ1739); 12 MONTHS \$145,000

CARPENTER, ROY; GEOCHEMISTRIES OF MERCURY, ARSENIC, AND OTHER METALS IN PUGET SOUND (1011111) XX00); 12 MONTHS \$38,500

BETHEL, JAMES S; MODELS OF THE FOREST ECOSYSTEM OF THE SNOHOMISH RIVER DRAINAGE BASIN (1014480); 12 MONTHS \$151,800

BATTELLE MEMORIAL INSTITUTE-BATTELLE NORTHWEST

PERKINS, RICHARD W; FEASIBILITY STUDY OF THE USE OF INERT TRACERS IN THE NATIONAL HAIL RESEARCH EXPERIMENT (AGOSJ79); 12 MONTHS \$38,000

#### WISCONSIN

INSTITUTE OF ECOLOGY

STEARNS, FOREST; URBAN ECOSYSTEM STUDIES (101,1997); 1 MONTHS \$10,000

UNIVERSITY OF WISCONSIN, MADISON

ANDERSON, C E; LABORATORY STUDIES OF ICE NUCLEI INHIBITORS (1051058); 12 MONTHS \$47,800

ANDERSON, C E, AND SIKDAR, D N; STUDY OF THE FEATURES AND ENERGY BUDGETS OF NORTHEASTERN COLORADO HAILSTORMS (1001878 X00); 12 MONTHS \$97,500

## WYOMING

UNIVERSITY OF WYOMING

VEAL, DONALD L: DEVELOPMENT OF LEAF-DERIVED ICE NUCLEI FOR WEATHER MODIFICATION (1038355 X00); 12 MONTHS \$68,000

## SOCIAL SYSTEMS AND HUMAN RESOURCES

## CALIFORNIA

RAND CORPORATION

LEVINE, ROBERT A; URBAN POLICY ANALYSIS (1092769 001); 8 MONTHS \$61,500

LEVINE, ROBERT A; PROJECTS IN SYSTEMATIC ANALYSIS OF URBAN POLICY (101974) 001); 12 MONTHS \$1,015,700

STANFORD UNIVERSITY

LUSIGNAN, BRUCE B; JOINT MISSION COALITION ORGANIZA-TION/STANFORD UNIVERSITY COMMUNITY (1019925 X01): 12 MONTHS \$261,200

UNIVERSITY OF CALIFORNIA, BERKELEY

STONEBRAKER, MICHAEL R; RESEARCH INITIATION USE OF ENGINEERING SYSTEMS CONCEPTS FOR JOB SCHEDULING IN CRIMINAL JUSTICE SYSTEMS (JUSTIC); 18 MONTHS \$20,000

UNIVERSITY OF CALIFORNIA, DAVIS

MCEVOY, JAMES 111, AND MUSOLF, LLOYD D; ENVIRONMENTAL DECISION MAKING IN THE LAKE TAHOE BASIN (1000022 002); 7 MONTHS \$100,000

## COLORADO

UNIVERSITY OF COLORADO

HAAS, EUGENE, AND WHITE, GILBERT; ASSESSMENT OF RESEARCH ON NATURAL HAZARDS (1032041); 26 MONTHS \$723,900

## DISTRICT OF COLUMBIA

NONE; OTHER PROGRAM AWARDS (08AWDS); \$882

AMERICAN COUNCIL ON EDUCATION

ASTIN, ALEXANDER W, AND BAYER, ALAN E; IMPACT OF ALTERNA-TIVE INSTITUTIONAL STRUCTURES ON THE OUTPUTS OF THE HIGHER EDUCATION SYSTEM (103404); 18 MONTHS \$529,300

AMERICAN REVOLUTION BICENTENNIAL COMMISSION

HULCHER, WENDELL E; KEY ASPECTS OF AMERICAN FEDERALISM (TOCCOSIO); 6 MONTHS \$10,000

#### FLORIDA

PLORIDA ATLANTIC UNIVERSITY

CATALDO, EVERETT F; DETERMINANTS OF RESEGREGATION- RE-JECTIONI COMPLIANCE BEHAVIOR AND POLICY ALTERNATIVES (1011855); 15 MONTHS \$549,600

#### GEORGIA

UNIVERSITY OF GEORGIA

LEE, EVERETT S, AND TARVER, JAMES D; POPULATION REDISTRIBUTION- A CHAILENGE FOR POLICY AND PLANNING (1034358); 18 MONTHS \$477,300

#### **ILLINOIS**

CENTER FOR RESEARCH LIBRARIES

WILLIAMS, GORDON, AND BERESFORD, JOHN C; CENSUS LABORATORY AND CLEARINGHOUSE (1034188); 18 MONTHS \$786,300

NATIONAL OPINION RESEARCH CENTER

DAVIS, JAMES A; A NATIONAL EVALUATION OF COMMUNITY SER-VICES (1031796); 18 MONTHS \$983,400

SOUTHERN ILLINOIS UNIVERSITY - CARBONDALE

KAHN, ALFRED; A STUDY OF CARBON MONOXIDE IN THE ST. LOUIS METROPOLITAN AREA AND SOME IMPLICATIONS FOR SOCIAL AND PLANNING POLICY (1029900 001); 18 MONTHS \$93,900

#### LOUISIANA

SOUTHERN UNIVERSITY

STEPTOE, ROOSEVELT; SOCIAL, ECONOMIC AND POLITICAL IMPACTS OF THE SCOTLANDVILLE BY-PASS (1014801); 12 MONTHS \$95,200

## NEW YORK

COLUMBIA UNIVERSITY

BARTON, ALLEN H, AND SIEBER, SAM D; NIEGHBORHOOD GOVERN-MENT AND THE QUALITY OF URBAN LIFE-EVALUATION OF AN EX-PERIMENT IN DECENTRALIZATION (1931), 36 MONTHS \$1,443,100

STATE UNIVERSITY AT STONY BROOK

NATHANS, ROBERT; POLICY RESEARCH ON URBAN PROBLEMS (105484 X00); 12 MONTHS \$332,700

#### **NORTH CAROUNA**

UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

STEGMAN, MICHAEL A; THE DYNAMICS OF NON-METROPOLITAN URBAN RENTAL HOUSING MARKETS- A COMPARATIVE ANALYSIS (103344); 36 MONTHS \$225,400

WEISS, SHIRLEY F; PERFORMANCE CRITERIA FOR NEW COMMUNITY DEVELOPMENT- EVALUATION AND PROGNOSIS (10) [485]; 32 MONTHS \$1,179,400

## PENNSYLVANIA

UNIVERSITY OF PENNSYLVANIA

WOLFGANG, MARVIN E; EVALUATION OF RESEARCH AND THEORY IN CRIMINOLOGY (103,610); 24 MONTHS \$578,800

## TENNESSEE

KNOXVILLE COLLEGE

MCARTHUR, WILLIAM H; AN INTERDISCIPLINARY ASSESSMENT OF THE TRADITIONALLY NEGRO INSTITUTIONS CAPABILITIES (1019303); 15 MONTHS \$97,990

## WISCONSIN

UNIVERSITY OF WISCONSIN, MADISON

FEATHERMAN, DAVID L, AND HAUSER, ROBERT M; OCCUPATIONAL CHANGES IN A GENERATION II (1031604 X00); 24 MONTHS \$888,300

# EXPLORATORY RESEARCH AND PROBLEM ASSESSMENT

RAND CORPORATION

JUNCOSA, MAKIO L, AND TURN, REIN; RESEARCH IN PROTECTION OF PRIVACY OF PERSONAL INFORMATION IN DATA BANKS-THEORETICAL AND TECHNICAL ASPECTS UMBIS 001); 12 WONTHS \$110,500

BAER, WALTER S; CABLE TV- RESEARCH AND PROBLEM ASSESSMENT FOR FRANCHISE DECISION-MAKING (103#107); 11 MONTHS 2247.000

HULT, JOHN L, AND OSTRANDER, NEILL C; A FEASIBILITY STUDY OF POLAR ICE AS A FRESH WATER RESOURCE (105484): 9 MONTHS 49.900

UNIVERSITY OF SOUTHERN CALIFORNIA

EMPEY, LAMAR T; SOCIAL AND CULTURAL CONTEXTS OF AGING-IM-PLICATIONS FOR SOCIAL POLICY (IOSIASS X00); 12 MONTHS \$277,000



Sed by ERIC 0 - 73 - 10

# NATIONAL RESEARCH CENTERS

## NATIONAL RADIO ASTRONOMY OBSERVATORY

#### CALIFORNIA

#### STANFORD RESEARCH INSTITUTE

PRESNELL, RONALD; OPERATION AND MAINTENANCE OF NRAO, (NSF-C430) (C704000); 4 MONTHS \$124,126

#### DISTRICT OF COLUMBIA

## DEPARTMENT OF ARMY-CORPS OF ENGINEERS

BANNISTER, WILLIAM; INTERAGENCY AGREEMENT WITH THE U.S. ARMY CORPS OF ENGINEERS FOR THE LAND ACQUISITION SERVICES FOR THE VLA (NRAO-C130) (CA90000); 36 MONTHS \$20,000

#### WEST VIRGINIA

#### NATIONAL RADIO ASTRONOMY OBSERVATORY

HEESCHEN, D 8; OPERATION AND MAINTENANCE OF NRAO, NSF-C450 (C450000 000): 12 MONTHS \$6,300,000

HEESCHEN, D S; OPERATION AND MAINTENALICE OF NRAO, NSF-C150 (C150000 011), \$225,874

## NATIONAL CENTER FOR ATMOSPHERIC RESEARCH

#### ARIZONA

## DEPARTMENT OF ARMY-BLECTRONIC PROVING GROUND

DIXON, K; INTERAGENCY AGREEMENT WITH U.S. ARMY TEST AND BYALUATION COMMAND TO PROVIDE ASSISTANCE IN CHECKING OUT AN INFRARED LINE SCANNER INSTALLED IN ONE OF THE QUEEN AIR AIRCRAFT CONTRACT NSF-C 460 (NCAR) (CA49000); 12 MONTHS \$1,410

## CALIFORNIA

## UNIVERSITY OF CALIFORNIA, SAN DIEGO

NIERENBERG, WILLIAM A; DRILLING OF SEDIMENTS IN THE PACIFIC AND ATLANTIC OCEANS AND ADJACENT SEAS, NSF-C182 (C19000 027\*), \$132,499

### COLORADO

## NATIONAL CENTER FOR ATMOSPHERIC RESEARCH

FIROR, JOHN W: CONTRACT FOR THE MANAGEMENT, OPERATION, AND MAINTENANCE OF THE NATIONAL CENTER FOR ATMOSPHERIC RESEARCH (C180000); 12 MONTHS \$3,600,000

FIROR, JOHN W; OPERATION AND MAINTENANCE OF THE NA-TIONAL CENTER FOR ATMOSPHERIC RESEARCH (C460) (C450000 002); \$12003.040

FIROR, JOHN W; OPERATION AND MAINTENANCE OF THE NATIONAL CENTER FOR ATMOSPHERIC RESEARCH, NSF - C-660 (C660000 00); \$4,889,460

FIROR, JOHN W; FUND JOINT EVALUATION COMMITTEE (NCAR), NSF-C660 (C660000 011); \$25,000

FIROR, JOHN W; 1973 SOLAR ECLIPSE COORDINATION - NATIONAL CENTERS FOR ATMOSPHERIC RESEARCH, NSF-C660 (C660000 012\*); 37.545

FIROR, JOHN W; CONTRACT FOR THE MANAGEMENT, OPERATION, AND MAINTENANCE OF THE NATIONAL CENTER FOR ATMOSPHERIC RESEARCH (NSF-C660) (C660000 014); \$2,073,604

FIROR, JOHN W; NATIONAL CENTER FOR ATMOSPHERIC RESEARCH, NSF-Cet (C740000); 80 MONTHS \$338,028

## DISTRICT OF COLUMBIA

## NONE; OTHER PROGRAM AWARDS (03AWDS); \$2,816

#### DEPARTMENT OF ARMY-CORPS OF ENGINEERS

COLES, R; INTERAGENCY AGREEMENT FOR PROVIDING IN-PLANT INSPECTION (CA05600 001): \$67

MATHERS, BRYANT; INTERAGENCY AGREEMENT FOR INVESTIGA-TION, TESTING AND ANALYSIS OF THE CONCRETE IN THE NCAR BUILDING (CA05900 009); \$934

MATHERS, BRYANT DR; INTERAGENCY AGREEMENT FOR IN-VESTIGATION, LESTING AND ANALYSIS OF THE CONCRETE IN THE NCAR BUILDING (CA39000 001); 12 MONTHS 11,000

## DEPARTMENT OF NAVY-AIR SYSTEMS COMMAND

TUTHILL, J R; INTERAGENCY AGREEMENT FOR OVERHAUL OF T&L-GE-10 ENGINE FROM DEHAVILLAND BUFFALO AIRCRAFT (UNDER CONTRACT NSF-C-660-NCAR) (CA16000 061); 12 MONTHS \$14,000

## KITT PEAK NATIONAL OBSERVATORY

#### ARIZONA

#### KITT PEAK NATIONAL OBSERVATORY

MAYALL, NICHOLAS U; CONTRACT FOR THE MANAGEMENT, OPERA-TION, AND MAINTENANCE OF THE KITT PEAK NATIONAL OBSERVA-TORY, TUCSON, ARIZONA (C100000 017), 12 MONTHS \$1,800,000

GOLDBERG, LEO; CONTRACT FOR THE MANAGEMENT, OPERATION, AND MAINTENANCE OF THE KITT PEAK NATIONAL OBSERVATORY (C 400000 018); \$5,515,000

GOLDBERG, LEO; OPERATION AND MAINTENANCE OF THE KITT PEAK NATIONAL OBSERVATORY, NSF-C 400 (C 400000 018); \$385,000

## CERRO TOLOLO INTER-AMERICAN OBSERVATORY

## CERRO TOLOLO INTER-AMERICAN OBSERVATORY

MAYALL, NICHOLAS U; CONTRACT FOR THE MANAGEMENT, OPERA-TION, AND MAINTENANCE OF THE CERRO TOLOLO INTER-AMERICAN OBSERVATORY, LA SERENA, CHILE (C345000 014); 12 MONTHS \$600,000

GOLDBERG, LEO; CONTRACT FOR THE MANAGEMENT, OPERATION, AND MAINTENANCE OF THE CERRO TOLOLO INTER-AMERICAN OB-SERVATORY, LA SERENA, CHILE (C525000 015); \$1,716,000

GOLDBERG, LEO: OPERATION AND MAINTENANCE OF THE CERRO TOLOLO INTER-AMERICAN OBSERVATORY. LA SERENA, CHILE, NSF-CSIS (CSISCON DIE). \$126,000

## NAT'L ASTRONOMY AND IONOSPHERIC CNTR AT ARECIBO

#### DISTRICT OF COLUMBIA

DEPARTMENT OF NAVY-NAVAL FACILITIES ENGINEERING COMMAND DORAN, MAURICE P; PROCUREMENT OF ELECTRIC SERVICES FOR

DURAN, MAURICE P; PROCUREMENT OF ELECTRIC SERVICES FOR THE NATIONAL ASTRONOMY AND IONOSPHERE CENTER AT ARECIBO, PUERTO RICO, CONTRACT NSF-C600 (CAT1000 003); 12 MONTHS \$52,000

#### PUERTO RICO

## ARECIBO OBSERVATORY

HAGFORS, TOR; OPERATION AND MAINTENANCE OF NATIONAL ASTRONOMY AND IONOSPHERE CENTER AT ARECIBO UNDER NSF-C400 (C500000 014); \$3,800,000

HAGFORS, TOR; OPERATION AND MAINTENANCE OF NATIONAL ASTRONOMY AND IONOSPHERE CENTER AT ARECIBO UNDER NSF-C600 (C600000 015); \$123,000

HAGFORS, TORS; OPERATION AND MAINTENANCE OF NATIONAL ASTRONOMY AND IONOSPHERE CENTER AT ARECIBO UNDER NSF-C600 (C600000 016); \$687,500

#### DEPARTMENT OF AIR FORCE-RAMBY AIR FORCE BASE

CLARK, KENNETH B; SERVICES TO PERSONNEL AND DEPENDENTS RESIDENT AT ARECIBO, NSF-C600 (CA66000); 60 MONTHS \$25,000



## 1973 SOLAR ECLIPSE COORDINATION

## COLORADO

NATIONAL CENTER FOR ATMOSPHERIC RESEARCH

FIROR, JOHN W; 1973 SOLAR ECLIPSE COORDINATION · NATIONAL CENTERS FOR ATMOSPHERIC RESEARCH, NSF-C660 (C660000 607); \$44,000
FIROR, JOHN W; 1973 SOLAR ECLIPSE COORDINATION · NATIONAL CENTERS FOR ATMOSPHERIC RESEARCH, NSF-C660 (C660000 018\*);

\$2,173
FIROR, JOHN W; 1974 SOLAR ECLIPSE COORDINATION · NATIONAL
PROPERTY OF THE PROPERTY OF T CENTER FOR ATMOSPHERIC RESEARCH, NSF-C160 (C660000 017); \$2,200

## DISTRICT OF COLUMBIA

NONE; OTHER PROGRAM AWARDS (OFAWDS); \$2,808

NONE: OTHER PROGRAM AWARDS (GIAWDS); \$2,318

**NEW YORK** 

NONE; OTHER PROGRAM AWARDS (01AWDS), \$285

VIRGINIA

NONE; OTHER PROGRAM AWARDS (01AWDS); \$1,844



# NATIONAL, INTERNATIONAL, AND SPECIAL RESEARCH PROGRAMS

## SPECIAL PROJECTS

NONE; OTHER PROGRAM AWARDS (GIAWDS); \$8,000

## ANTARCTIC RESEARCH PROGRAMS

## SCIENCE PROGRAMS

#### ALASKA

## UNIVERSITY OF ALASKA

HESSLER, V P, AND HEACOCK, R R; EXTRALOW FREQUENCY STU-DIES AT THE GEOMAGNETIC POLES (VOISSIS); 12 MONTHS \$32,000

## UNIVERSITY OF ALASKA-GEOPHYSICAL INSTITUTE

WESCOTT, EUGENE M, AND NIELSEN, HANS C S; INVESTIGATION OF AURORAL CONJUGACY (VOISSOS DOI\*): 6 MONTHS \$19,900 AKASOFU SYUMICHU, A STUDY OF THE MINERAL CONJUGACY

AKASOFU, SYUN-ICHI; A STUDY OF THE MIDDAY AURORAS AT THE SOUTH POLE STATION (VOISISS 001); 12 MONTHS \$19,200

## CALIFORNIA

## CALIFORNIA INSTITUTE OF TECHNOLOGY

CAMERON, ROY E; ECOLOGY OF ANTARCTIC MICROORGANISMS (C335000 003); \$25,000

## MCDONNELL DOUGLAS ASTRONAUTICS COMPANY

MASLEY, A J; CONTRACT FOR OPERATION OF THE CONJUGATE POINT RIOMETER PROGRAM (C193000 004\*); 12 MONTHS \$23,044

## san diego natural history museum

JEHL, JOSEPH R JR; COMPARATIVE STUDIES OF OCEANIC BIRDS IN CHILE AND ARGENTINA IN THE AUSTRAL WINTER (VG)8739); 24 MONTHS \$20,800

## STANFORD RESEARCH INSTITUTE

BATES, HOWARD F. AND HODGES, JAMES C; POLAR AURORAL BADAR INVESTIGATION AT MCMURDO BASE (VOJI608); 12 NONTHS \$48,600

## STANFORD UNIVERSITY

HELLIWELL, R A; VLF PROGRAM IN THE ANTARCTIC (VO28840 X01); 12 MONTHS \$225,200

## UNIVERSITY OF CALIFORNIA, DAVIS

STRONG, PRANK E; BIOENERGETICS OF AN ANTARCTIC ECOSYSTEM (VOTUSE 001); 12 MONTHS \$22,600

LIPPS, JERE H; BIOLOGY AND ECOLOGY OF SHALLOW-WATER BENTHIC FORAMINIFERA, ANTARCTIC PENINSULA (VOS1162); 24 MONTHS \$35,000

## University of California, los angeles

SLICHTER, LOUIS B, AND KNOPOFF, LEON; RESEARCH IN SOLID-EARTH GEOPHYSICS AT SOUTH POLE (VOISOI) 001); 12 MONTHS \$86,000 KNOPOFF, LEON; SEISMOLOGICAL STUDIES IN ANTARCTICA (VOISEIS); 14 MONTHS \$48,000

## UNIVERSITY OF SOUTHERN CALIFORNIA

BANDY, ORVILLE L; ANTARCTIC PALEOCEANOGRAPHY AND PALEOBATHYMETRY (VOSSIS OOS); 12 MONTHS \$15,200

## University of California, San Dirgo-Scripps institution of Oceanography

ELSNER, ROBERT W; TEMPERATURE REGULATION IN THE NEW-BORN WEDDELL SEAL, LEPTONYCHOTES WEDDELLI (VO48889 001); 12 MONTHS \$34.200

KOCYMAN, GERALD L; BIOLOGY OF DEEP DIVING IN ANTARCTIC BIRDS AND MAMMALS (VOSLESS COS): 12 MONTHS \$40,500

HOLM-HANSEN, O, CARLUCCI, ANGELO F, AND WILLIAMS, PETER M; THE DISTRIBUTION, BIOCHEMICAL ACTIVITY, AND CHEMICAL COM-POSITION OF PLANKTON IN ANTARCTIC WATERS (VOR1110 001): 12 MONTH \$34,000

DAYTON, FAUL K; BIOLOGICAL INTERACTIONS STRUCTURING AN-TARCTIC MARINE COMMUNITIES (YOSSI I); 24 MONTHS \$49,200 FOSTER, THEODORE D; WEDDELL SEA OCEANOGRAPHIC IN-VESTIGATION (YOSGOS); 12 MONTHS \$425,100

# DEPARTMENT OF NAVY-NAVAL UNDERSEA RESEARCH & DEVELOPMENT CENTER

CUMMINGS, WILLIAM C; BIOACOUSTICS AND RELATED BEHAVIOR OF SUBANTARCTIC CETACEANS (AGOODS) 001); \$25,700

## LOCKHEED AIRCRAFT CORPORATION-LOCKHEED RESEARCH LABORATORY

MENDE, 8 B; SOUTH POLE PHOTOMETRIC EXPERIMENT (C459000 001); 13 MONTHS \$57,000

## COLORADO

## COLORADO SCHOOL OF MINES

HADSELL, FRANK; SUPPORT OF GEOPHYSICAL STUDIES (VOS1188); 12 MONTHS \$5,200

## UNIVERSITY OF COLORADO

LEMASURIER, WESLEY E; LABORATORY STUDY OF YOLCANIC ROCKS FROM MARIE BYRD LAND, ANTARCTICA (VOESSES 001); 12 MONTHS \$10,000

## DISTRICT OF COLUMBIA

## GEOLOGICAL SURVEY

RADLINSKI, WM A; PROGRAM FOR ANTARCTIC MAPPING OPERA-TIONS (AG00177 001); 12 MONTHS \$250,000

MCKELVEY, VINCENT E; GEOLOGY OF THE LASSITER COAST, AN-TARCTICA (AGO0187 608); 12 MONTHS \$76,100

MCKELVEY, VINCENT; GEOLOGY OF THE LASSITER COAST, ANTARC-TICA (AGO0187 009); 12 MONTHS \$90,300

HENDRICKS, E L; GEOLOGICAL INVESTIGATIONS IN THE PEN-SACOLA MOUNTAINS, ANTARCTICA (AGOOSIS 001), 12 MONTHS \$30,400 BEHRENDT, JOHN C; AEROMAGNETIC AND GRAVIMETRIC DATA REDUCTION OF THE PENSACOLA MOUNTAINS AREA, ANTARCTICA (AGOOSIS 001); 12 MONTHS \$10,400

## SMITHSONIAN INSTITUTION

FEHLMANN, H ADAIR; PARTICIPATION IN USARP EXPEDITIONS (A004105 003); 12 MONTHS \$30,400

FEHLMANN, HADAIR; COOPERATIVE SYSTEMATICS STUDIES IN AN-TARCTIC BIOLOGY (VOJIST); 12 MONTHS \$42,800

## DEPARTMENT OF ARMY-CORPS OF ENGINEERS

MICOLETTI, FRANK T; STANDARD GEOGRAPHIC NOMENCLATURE IN THE ANTARCTIC FOR UNITED STATES USE (CA14000 004); 12 MONTHS \$20,000

## **PLORIDA**

## FLORIDA STATE UNIVERSITY

DEVORE, GEORGE W; CONTRACT FOR CURATORSHIP OF 'ELTANIN' CORE COLLECTION (C884000 003); 12 MONTHS \$56,100
OSMOND, J K; GEOCHRONOLOGY OF USNS 'ELTANIN' CORES FROM THE SOUTHERN OCEAN (V085786 001); 12 MONTHS \$7,800



FRAKES, LAWRENCE A: MARINE GEOLOGY OF THE SOUTHERN OCEAN (VOSTAID 001); 12 MONTHS \$83,100

FRAKES, LAWRENCE A; MARINE GEOLOGY OF THE SOUTHERN OCEAN (VO21849 000); \$3,400

#### DAHO

### UNIVERSITY OF IDAHO

ERICKSÓN, ALBERT W; POPULÁTION STUDIES OF ANTARCTIC SEALS: CENSUS AND REPRODUCTIVE BIOLOGY (VOSOTO); 24 MONTHS \$97,800

#### HUNOIS

### NORTHERN ILLINOIS UNIVERSITY

MCGINNIS, LYLE D; CONTRACT FOR - SUPPORT OF DRY VALLEY DRILLING PROJECT (C414000 001); 6 MONTHS \$6,000

#### KANSAS

#### WICHITA STATE UNIVERSITY

TASCH, PAUL; CONCHOSTRACAN PALEONTOLOGY OF THE CENTRAL TRANSANTARCTIC MOUNTAINS. ANTARCTICA (VOSJON); 18 MONTHS \$3,500

#### MARYLAND

### JOHNS HOPKINS UNIVERSITY

SLADEN, WILLIAM J L; GRADUATE STUDIES IN ECOLOGY AND COM-PARATIVE BEHAVIOR (A015#15 001), 8 MONTHS \$6,200

### NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION

REID, GEORGE C; ERL ANTARCTIC RIOMETER DATA PROGRAM, 1972 (AG00129 003); 12 MONTHS 121,700

RUBIN, M. J., AND HESS, W. N.; GEOPHYSICAL MONITORING PROGRAM IN ANTARCTICA (GMA) (AGOOSST 001°); 12 MONTHS \$261,500

FERGUSON, EARL E; U.S. UPPER ATMOSPHERE GEOPHYSICS RESEARCH PROGRAMS AT YOSTOK (AGO0283); 12 MONTHS \$6,100

### UNIVERSITY OF MARYLAND, COLLEGE PARK

ROSENBERG, THEODORE J; ENERGETIC ELECTRON PRECIPITATION NEAR THE PLASMAPAUSE (VOSSELI X01); 12 MONTHS \$71,500

ZOLLER, WILLIAM H, AND DUCE, ROBERT A: TRACE METALS AND HALOGENS IN THE ANTARCTIC ATMOSPHERE (VOISSIS); 12 MONTHS \$1,600

### MASSACHUSETTS

### CLARK UNIVERSITY

GANNUTZ, THEODORE P: PHOTOSYNTHESIS AND RESPIRATION OF ANTARCTIC LICHENS (A013495 001); \$2,500

### MICHIGAN

### MICHIGAN STATE UNIVERSITY

IMSHAUG, HENRY A: TERRESTRIAL CRYPTOGAMS OF THE SUBAN-TARCTIC (Vossession); 12 Months \$48,700

### UNIVERSITY OF MICHIGAN

WIIN-NIELSEN, AKSEL; SUPPORT OF METEOROLOGICAL STUDIES (V02703) 001); 12 MONTHS \$6,700

### MINNESOTA

### UNIVERSITY OF MINNESOTA

SINIFF, DONALD B; POPULATION STUDIES OF ANTARCTIC SEALS-MODELING AND REGULATORY BIOLOGY (VORISE? 001); 24 MONTHS \$100,000

SINIFF, DONALD B; STATUS AND POPULATION DYNAMICS OF AN-TARCTIC SEALS (VOLUME); 12 MONTHS \$26,600

### NEBRASKA

### UNIVERSITY OF NEBRASKA AT LINCOLN

ZUMBERGE, JAMES H; CONTRACT FOR - COORDINATION OF ROSS ICE SHBLF PROJECT (C726000); 41 MONTHS \$4,570

### HIYADA

### UNIVERSITY OF NEVADA SYSTEM OFFICE

WARBURTON, JOSEPH A; ANALYSIS FOR WEATHER MODIFICATION CHEMICALS IN ANTARCTIC ICE (VO27198 001); 12 MONTHS \$40,900

### NEW HAMPSHIRE

### DARTMOUTH COLLEGE

MORGAN, MILLETT G; YLF AND ULF CONJUGATE INVESTIGATION OF THE PLASMAPAUSE (VOISSET 001\*); 12 MONTHS \$18,200

# DEPARTMENT OF ARMY-COLD REGIONS RESEARCH AND ENGINEERING LAB

MOCK, S. J., AND COLBECK, S. C.; GEOPHYSICAL AND GLACIOLOGICAL FIELD/INVESTIGATIONS IN GREENLAND (AGGG18\*); 12 MONTHS \$23,900

### NEW MEXICO

ATOMIC ENERGY COMMISSION ALBUQUERQUE OPERATIONS OFFICE-AEC

OFTE, DON; STUDY OF A SEASONAL ASYMMETRY IN AURORAL CON-JUGACY (AGOOTIO); 12 MONTHS \$5,000

### NEW YORK

### AMERICAN GEOGRAPHICAL SOCIETY

BUSHNELL, VIVIAN C; ANTARCTIC MAP FOLIO SERIES (C185000 018); 12 MONTHS \$20,000

PINTHER, MIKLOS; MAINTAIN AN UP-TO-DATE REVISION OF THE MAP OF ANTARCTICA, SCALE 13,000,000 (C4,1001 000); 12 MONTHS \$2,000

COLUMBIA UNIVERSITY-LAMONT-DOHERTY GEOLOGICAL OBSERVATORY

DALZIEL, IAN W D; THE STRUCTURE AND TECTONIC HISTORY OF THE NORTHERN LIMB OF THE SCOTIA ARC (VOISIA 001); 8 MONTHS 841800

GORDON, ARNOLD L; COLLECTION, PROCESSING AND ANALYSIS OF PHYSICAL OCEANOGRAPHIC DATA IN ANTARCTIC WATERS (VOICE) 12 MONTHS \$164,800

HAYES, DENNIS, AND EWING, MAURICE; GEOPHYSICAL STUDIES FROM 'ELTANIN' IN 1972 (VO\$7172 001); 5 MONTHS \$101,000

### **NORTH CAROUNA**

#### DUKE UNIVERSITY

SEARLES, RICHARD B; AN ECOLOGICAL AND SYSTEMATIC STUDY OF THE BENTHIC MARINE ALGAE OF SOUTHERN CHILE (YOS1766); 24 MONTHS \$45,200

#### OHIO

### OHIO STATE UNIVERSITY

DALRYMPLE, PAUL C; ANALYSIS OF PLATEAU MICROMETEOROLOG-ICAL TOWER DATA (VOLUM) 001); 12 MONTHS \$42,500

WHILLANS IAN M; STUDY OF ICE SHEET DYNAMICS NORTHEAST OF BYRD STATION (VOISIAT XOI): 12 MONTHS \$39,600

YOUNG, STEVEN B; SYSTEMATICS OF PHYTOGEOGRAPHY OF VASCU-LAR PLANTS OF THE SOUTH POLAR REGIONS (VOSSIST 001); 12 MONTHS \$20,200

COATES, DONALD A, AND ELLIOT, DAVID H; GEOLOGY OF THE BEARDMORE GLACIER-SCOTT, GLACIER REGION, TRANSANTARCTIC MOUNTAINS, ANTARCTICA (VOI6652 001); 12 MONTHS \$18,400

BULL, COLIN; SUPPORT OF GEOLOGICAL STUDIES (FOR ARMANDO FASOLA) (V027459 601); 12 MONTHS 48,200

ORHEIM, OLAV: STUDIES OF GLACIERS IN THE SOUTH SHETLAND ISLANDS (VOS8895 001); 12 MONTHS \$2,700

RUNDLE, ARTHUR S; ANALYSIS OF GLACIOLOGY AND METEOROLOGY OF ANYERS ISLAND, ANTARCTICA (VOSERTS), 12 MONTHS \$10,600

HAMILTON, WAYNE L; DUST CONCENTRATIONS IN BYRD CORE COM-PARED WITH CLIMATE OVER LAST 100,000 YEARS (VG58899); 14 MONTHS 430,000

### OKLAHOMA

### OKLAHOMA MEDICAL RESEARCH FOUNDATION

SHURLEY, JAY T; A STUDY OF THE PSYCHOPHYSIOLOGY OF SLEEP AND DREAMING IN ANTARCTICA (A018688 601); 12 MONTHS \$20,000

### OREGON

### OREGON STATE UNIVERSITY

BYRNE, JOHN V; SUPPORT OF OCEANOGRAPHIC STUDIES (VOSILET); 12 MONTHS 45,400

OREGON STATE UNIVERSITY-MARINE SCIENCE CENTER

HEDGPETH, JOEL W: TIDAL ZONE ECOLOGY AT PALMER STATION, ANVERS ISLAND, ANTARCTICA (A01814 001): \$1,000

### PENNSYLVANIA

### FRANKLIN INSTITUTE BARTOL RESEARCH FOUNDATION

POMERANTZ, MARTIN A: INVESTIGATIONS OF COSMIC RAY INTENSITY VARIATIONS IN ANTARCTICA (VOSSSS XGI): 12 MONTHS \$107,200

### RHODE ISLAND

### UNIVERSITY OF RHODE ISLAND

KENNETT, JAMES P; MICROPALEONTOLOGICAL AND PALEOEN-VIRONMENTAL STUDIES OF MARINE SEDIMENTS FROM THE SOUTHERN OCEAN (VOSSOS OII): 12 MONTHS \$20,000

UNIVERSITY OF RHODE ISLAND-GRADUATE SCHOOL OF OCEANOGRAPHY

WATKINS, N D; STUDIES OF THE PALEOMAGNETISM OF ELTANIN' DEEP-SEA SEDIMENTARY CORES (VOSSUO DOI): 12 MONTHS \$39,800

WATKINS, NORMAN D; YOLCANOLOGY, PETROLOGY, GEOCHEMISTRY AND PALEOMAGNETISM OF ST. PAUL AND NEW AUSTERDAM ISLANDS, SOUTHEASTERN INDIAN OCEAN (YOLL 180); 12 MONTHS \$12,000



### SOUTH CAROLINA

UNIVERSITY OF SOUTH CAROLINA

CONOLLY, JOHN B; SEDIMENTATION PATTERNS IN THE SOUTHERN OCEAN BETWEEN AUSTRALIA AND ANTARCTICA (VORRES 001); 12 MONTHS \$12,000

#### TEXAS

#### TEXAS A & M UNIVERSITY

EL-SAYED, SAYED Z; PHYTOPLANKTON PRODUCTION AND ITS ROLE IN THE STUDY OF THE ANTARCTIC MARINE ECOSYSTEM (Y025826 001); 12 MONTHS \$75,400

EL-SAYED, SAYED Z; PHYTOPLANKTON PRODUCTION AND ITS ROLE IN THE STUDY OF THE ANTARCTIC MARINE ECOSYSTEM (VORSERS 608); \$4,000

BOTTINO, NESTOR R; LIPIDS OF ANTARCTIC MARINE ORGANISMS (VOSOLIS); 24 MONTHS \$52,100

### TRXAS TRCH UNIVERSITY

WADE, Y ALTON, THE GEOLOGY OF MARIE BYRD AND ELLSWORTH LANDS, ANTARCTICA (Vosteol DOI); 12 MONTHS \$20,000

STRANDTMANN, R W; POPULATION DYNAMICS OF ANTARCTIC TER-RESTRIAL ARTHROPODS (VORISS) 001): 12 MONTHS \$26,100

### UTAH

### UTAH STATE UNIVERSITY

WULLER-SCHWARZE, DIETLAND; ANTI-PREDATOR AND SOCIAL BEHAVIOR IN ADELIE PENGUINS (A011416-001); 12 MONTHS \$38,100 MULLER-SCHWARZE, D; ANTI-PREDATOR AND SOCIAL BEHAVIOR IN ADELIE PENGUINS (VOS1815); 12 MONTHS \$42,200

### VIRGINIA

#### ROANOKE COLLEGE

THOMPSON, JESSE C JR; ECOLOGY AND SYSTEMATICS OF CILIATED PROTOZOA ON THE ANTARCTIC PENINSULA (A016495 001); 2 MONTHS \$5,700

### VIRGINIA POLYTECHNIC INSTITUTE

PARKER, BRUCE C; LIMNOLOGICAL INVESTIGATIONS OF ALGAL COMMUNITIES (AGISTSS 008); 8 MONTHS \$13,900

PATERSON, ROBERT A; FRESH WATER AND MARINE ANTARCTIC FUNGI (PLANKTON) PARASITES AND AQUATIC SAPROPHYTES (VOSIII); 12 MONTHS \$24,300

### WISCONSIN

### UNIVERSITY OF WISCONSIN, MADISON

BENTLEY, CHARLES R; ANALYSIS OF ANTARCTIC GEOPHYSICAL DATA (Voto741 001): 12 MONTHS \$28,700

SCHWERDTFEGER, WERNER; TOPICS OF ANTARCTIC METEOROLOGY (Votatio 001); 12 MONTHS \$37,300

CLAPP, JAMES L, AND BENTLEY, CHARLES B; ANALYSIS OF ROOSEVELT ISLAND STRAIN DATA (VOSESTE), 12 MONTHS \$15,600

### WYOMING

### UNIVERSITY OF WYOMING

HOFMANN, DAVID 1; MEASUREMENT OF SUBMICEON PARTICULATE MATTER IN THE ANTARCTIC STRATOSPHERE (VO28077 001); 12 MONTHS \$38,400

HOUSTON, R.S., AND SMITHSON, S.B.; GEOLOGICAL AND GEOPHYSICAL STUDIES IN SOUTH VICTORIA LAND, ANTARCTICA (VGJ5108); 12 MONTHS \$4,000

### FIELD SUPPORT

### CALIFORNIA

### HOLMES AND NARVER INC

RICKEY, ROY; CONTRACT FOR SCIENTIFIC SUPPORT ACTIVITIES FOR THE U.S. ANTARCTIC RESEARCH PROGRAM (C311000 008); \$10,673 RICKEY, ROY; SCIENTIFIC SUPPORT ACTIVITIES FOR THE U.S. ANTARCTIC RESEARCH PROGRAM (C311000 009); 12 MONTHS 1493,300

### STANFORD UNIVERSITY

LUSIGNAN, BRUCE B; DESIGN AND PROTOTYPE FABRICATION OF AN AUTOMATIC UNMANNED ANTARCTIC GEOPHYSICAL LABORATORY (C582000 005); 12 MONTHS \$148,000

### DISTRICT OF COLUMBIA

NONE; OTHER PROGRAM AWARDS (61AWDS); \$194

### AMERICAN EXPRESS COMPANY

MUMMERY, DESMAN L; TRANSPORTATION SERVICES RELATED TO NON-GOVERNMENT TRAVEL IN CONNECTION WITH USARP (C314000 013): 12 MONTHS \$100,000

### HARBRIDGE HOUSE INC

GARRETT, W H; ENGINEERING STUDY OF THE MANNING OF THE USNS ELTANIN (C788000); 3 MONTHS \$35,334

### DEPARTMENT OF NAVY-MILITARY SEA TRANSPORT SERVICE

GRALLA, ARTHUR R; OPERATION OF SHIP USNS ELTANIN (CAISOOD 008); 3 MONTHS \$400,000

GRALLA, ARTHUR B; OPERATION OF SHIP USNS ELTANIN (CA11000 009); 9 MONTHS \$1,300,000

### DEPARTMENT OF NAVY-NAVAL SHIP ENGINEERING CENTER

DIEHL, WILLIAM F; SERVICES IN SUPPORT OF USNS ELTANIN SATELLITE NAVIGATION SYSTEM (CA05000 003); 12 MONTHS \$20,000

### DEPARTMENT OF NAVY-NAVY SUBSISTENCE OFFICE

VOGEL, R E; CONTRACT FOR RATIONS FURNISHED USARP PERSON-NEL (CA03000 604); 12 MONTHS \$50,000

#### MARYLAND

### HYDROSPACE RESEARCH CORPORATION

QAY, SHELTON M JR; SUPPORT SERVICES FOR THE UNITED STATES ANTARCTIC RESEARCH PROGRAM (USARP) RIV HEROIPALMER STA-TION RESEARCH SYSTEM (C655000 001); 12 MONTHS \$470,978

#### RMC INC

DAY, CORNELIUS, CONTRACT FOR ANALYSIS OF THE U.S. PROGRAM IN ANTARCTICA (C681000); 8 MONTHS \$99,987

### **NEW HAMPSHIRE**

# DEPARTMENT OF ARMY-COLD REGIONS RESEARCH AND ENGINEERING LAB

HANSEN, B LYLE; CORE DRILLING IN ANTARCTICA- AN ENGINEER-ING STUDY (CA00061); 12 MONTHS \$49,500

LANGWAY, CHESTER C JR; OPERATION OF THE CENTRAL ICE CORE STORAGE FACILITY (CA23000 002); 12 MONTHS \$20,034

#### NEW JERSE

### ALPINE GEOPHYSICAL ASSOCIATES INC

SMOLEN, WALTER; CONTRACT FOR FURNISHING OF SERVICES IN SUPPORT OF RESEARCH PROGRAMS CONDUCTED ABOARD THE USNS 'ELTANIN' (C598000 005); 3 MONTHS \$42,000

SMOLEN, WALTER; CONTRACT FOR FURNISHING OF SERVICES IN SUPPORT OF RESEARCH PROGRAMS ABOARD THE USNS ELTAIN (C398000 008); 12 MONTHS \$461,402

### POLAR INFORMATION SERVICE

### DISTRICT OF COLUMBIA

NONE; OTHER PROGRAM AWARDS (16AWDS); \$14,858

### AMERICAN GEOPHYSICAL UNION

SPILHAUS, A F JR; PRODUCTION OF AN ENGLISH EDITION OF SOVIET ANTARCTIC EXPEDITION INFORMATION BULLETIN, NUMBERS 78-90 (VOJ2011); 24 MONTHS \$23,000

### LIBRARY OF CONGRESS

THURONYI, GEZA; ABSTRACTING AND INDEXING SERVICE FOR CURRENT ANTARCTIC LITERATURE (CA\$0000 001); 12 MONTHS \$105,100

### SMITHSONIAN INSTITUTION

LANDRUM, BETTY J; RECORDING OF DATA FOR SPECIMENS COL-LECTED DURING THE U.S. ANTARCTIC PROGRAM (CU1000 COT); 12 MONTHS \$55,639

FEHLMANN, HA; CONTRACT FOR SORTING OF COLLECTIONS FROM THE U.S. ANTARCTIC RESEARCH PROGRAM (USARP) (C49500G 007); 12 MONTHS 498-610

FEHLMANN, H A; PROCESSING OF USARP ROCK SAMPLES FROM THE SOUTHERN OCEAN (C559000 006); 12 MONTHS \$20,300

### MARYLAND

NONE; OTHER PROGRAM AWARDS (04AWDS); \$492

### VIRGINIA

NONE; OTHER PROGRAM AWARDS (01AWDS); \$25

### ADVISORY SERVICES

### DISTRICT OF COLUMBIA

NATIONAL ACADEMY OF SCIENCES NATIONAL RESEARCH COUNCIL DEGOES, LOUIS; TASK ORDER FOR COMMITTEE ON POLAR RESEARCH (C110018 011); 12 MONTHS \$94,000

DERBYSHIRE, Q A; COMMITTEE ON POLAR RESEARCH!ARCTIC AS-SESSMENT GROUP (C#1003# 012); 6 MONTHS \$30,000



### ANTARCTIC LOGISTIC SUPPORT-U.S. NAVY

### CALIFORNIA

### BECHTAL INCORPORATED

SANDERS, WILLIAM; ENGR. DESIGN AND ANALYTICAL SERVICES-U.S. PROGRAM IN ANTARCTICA (C101000); 6 MONTHS \$494,000

#### HOLMES AND NARVER INC.

RICKEY, ROY; SCIENTIFIC SUPPORT ACTIVITIES FOR THE U.S. ANTARCTIC RESEARCH PROGRAM (CS11000 010); 6 MONTHS \$24,000

### UNIVERSITY OF CALIFORNIA, SAN DIEGO

AXFORD, WIAN, AND CHIVERS, H.J.A.; IONOSPHERE INVESTIGATION FROM UNMANNED GEOPHYSICAL OBSERVATORIES (VOIJEE); 12 MONTHS \$190.000

### DISTRICT OF COLUMBIA

#### WESTERN UNION INTERNATIONAL INC

PARSONS, ARTHUR E; SATELLITE SERVICES FOR THE UNMANNED GEOPHYSICAL OBSERVATORY (C110000); 10 MONTHS \$88,800

### DEPT. OF DEPENSE-DEPARTMENT OF DEFENSE

MCCUDDIN, LEO B; LOGISTIC SUPPORT OF THE UNITED STATES PROGRAM IN ANTARCTICA (CA00035 004); \$ MONTHS \$13,206,000

WELCH, DAVID F; LOGISTIC SUPPORT OF THE UNITED STATES PRO-GRAM IN ANTARCTICA (CA35000 001); 1 MONTHS \$3,000,000 SWINBURNE, H W; LOGISTIC SUPPORT OF THE UNITED STATES PRO-

GRAM IN ANTARCTICA (CA55000 001); 1 MONTHS \$1,000,000

MCCUDDIN, LEO B; LOGISTIC SUPPORT OF THE UNITED STATES
PROGRAM IN ANTARCTICA (CA55000 003); 1 MONTHS \$1,000,000

#### MARYLAND

### UNIVERSITY OF MARYLAND, COLLEGE PARK

ZOLLER, WILLIAM H, AND DUCE, ROBERT A; TRACE METALS AND HALOGENS IN THE ANTARCTIC ATMOSPHERE (VOISISE); 12 MONTHS \$45.300

#### MINNESOTA

### **E J LONGYBAR COMPANY**

LINDELOF, LEN; DRILLING RIG FOR THE DRY VALLEY DRILLING PROJECT (C735000); 10 MONTHS \$200,000

### WASHINGTON

### UNIVERSITY OF WASHINGTON

LIEMOHN, HAROLD B, AND HELMS, WARD J; A GEOMAGNETIC MICROPULSATION EXPERIMENT FOR THE ANTARCTIC UNMANNED GEOPHYSICAL OBSERVATORY (YOSI883), 12 MONTHS \$51,900

### **ARCTIC RESEARCH PROGRAMS**

### SCIENCE PROGRAMS

### ALASKA

### UNIVERSITY OF ALASKA

WEST, GEORGE C; THE STRUCTURE AND FUNCTION OF THE TUNDRA ECOSYSTEM (VOS0342 XOSO); 12 MONTHS \$414,600

WEST, GEORGE C; THE STRUCTURE AND FUNCTION OF THE TUN-DRA ECOSYSTEM (VO20312 001); \$29,700

FISCHER, VICTOR; MAN IN THE ARCTIC PROGRAM (VOSSISS); 12 MONTHS \$100,000

### UNIVERSITY OF ALASKA-GEOPHYSICAL INSTITUTE

WILSON, CHARLES R; COLLABORATIVE RESEARCH IN ACOUSTIC RADAR INVESTIGATION OF ARCTIC RADIATION INVERSIONS IN ICE FOG (V007687 001); 12 MONTHS \$65,200

WESCOTT, EUGENE M, AND NIELSEN, HANS C S; INVESTIGATION OF AURORAL CONJUGACY (V028809 001\*); 6 MONTHS \$19,900

### CALIFORNIA

### CALIFORNIA STATE UNIVERSITY, SAN DIEGO

MILLER, PHILIP C, COLLIER, BOYD D, AND MELCHIOR, HERBERT R; MODELING OF PRIMARY PRODUCERS AND RELATED STUDIES UNDER TUNDRA BIOME RESEARCH (VOSSES XOI); 12 MONTHS \$35,000

### MCDONNELL DOUGLAS ASTRONAUTICS COMPANY

MASLEY, A J; CONTRACT FOR OPERATION OF THE CONJUGATE POINT RIOMETER PROGRAM (CIBSOOD COS\*); 12 MONTHS \$27,872

### UNIVERSITY OF CALIFORNIA, BERKELEY

GERSPER. PAUL L, AND PITELKA, FRANK A; POPULATION STUDIES OF THE BROWN LEMMING, BIOENERGETICS, SOCIAL ORGANIZATION, AND HABITAT UTILIZATION OF THE LAPLAND LONGSPUR, SOIL-PLANT NUTRIENT INTERACTIONS IN TUNDRA ECOSYSTEMS (VOISIS KOI); 12 MONTHS \$40,000

### UNIVERSITY OF CALIFORNIA, DAVIS

GODDARD, WILSON B; AERODYNAMIC DETERMINATION OF SHEAR-STRESS OVER AND UNDER ARUTIC PACK ICE (VOSPOSO 001); 18 MONTHS 818.100

### UNIVERSITY OF CALIFORNIA, SAN DIEGO

AXFORD, WIAN, AND CHIVERS, HUGH J A; AN INVESTIGATION OF THE COMPOSITION OF AURORAL PRIMARY IONS (VOIS) 12 MONTHS \$47.500

#### COLORADO

### UNIVERSITY OF COLORADO

BARRY, ROGER G, AND JACOBS, JOHN D; ENERGY BUDGET STUDIES IN RELATION TO FAST-ICE BREAKUP PROCESSES IN DAVIS STRAIT (VOCALIS 001); 6 MONTHS \$40,000

IVES, J D; COLORADO ALPINE TUNDRA STUDIES (VOR9350 X61); 12 MONTHS \$70,700

#### UNIVERSITY OF DENVER

WILLIAMSON, PROGER; AN INVESTIGATION OF IONISATION IN THE ATMOSPHERE BELOW 70 KM (VOISISS 001); 12 MONTHS \$49,000

#### CONNECTICUT

#### CENTER FOR THE ENVIRONMENT AND MAN INC

PANDOLFO, JOSEPH P; SIMULATED METEOROLOGICAL VARIATION OVER ARCTIC COASTAL TUNDRA (VORDIR XOZ); 12 MONTHS \$15,800

LORD, NORMAN W, AND PANDOLFO, JOSEPH P; SIMULATIONS OF METEOROLOGICAL VARIATION OVER ARCTIC COASTAL TUNDRA UNDER PERTURBED PHYSICAL INTERFACE CONDITIONS (VOR9348 001); \$12.400

### DISTRICT OF COLUMBIA

### ARCTIC INSTITUTE OF NORTH AMERICA

SATER, JOHN E, AND MULLER, FRITZ; BAFFIN BAY - NORTH WATER WINTER PILOT STUDY (C653000 001); 6 MONTHS \$18,440

SATER, JOHN E, AND MULLER, FRITZ; A MESO-SCALE GLACIO-CLI-MATOLOGICAL STUDY OF THE NORTH WATER AREA (C455000 002); 18 MONTHS \$63,935

### HUNOIS

### UNIVERSITY OF ILLINOIS AT URBANA

BATZLI, GEORGE O; POPULATION DETERMINATION AND NUTRIENT FLUX THROUGH LEMMINGS (VOSSES X00), 12 MONTHS \$22,100

### MARYLAND

### NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION

DERR, VERNON; COLLABORATIVE RESEARCH IN ACOUSTIC RADAR INVESTIGATION OF ARCTIC RADIATION INVERSIONS IN ICE FOG (AGORSS 001); 12 MONTHS \$49,900

RUBIN, M.J., AND HESS, W.N.; GEOPHYSICAL MONITORING PROGRAM.
IN ANTARCTICA (GMA) (AGOOMT 001°); 12 MONTHS \$9,000

### **NEW HAMPSHIRE**

### **DARTMOUTH COLLEGE**

MORGAN, MILLETT G; VLF AND ULF CONJUGATE INVESTIGATION OF THE PLASMAPAUSE (VOSSET 001\*); 12 MONTHS \$29,700

# DEPARTMENT OF ARMY-COLD REGIONS RESEARCH AND ENGINEERING LAP

LANGWAY, CHESTER CJR; ANALYSIS OF THE DEEP ICE CORES AND SUB-ICE MATERIAL (AGOOSIS 005); 12 MONTHS \$51,100

WEEKS, W.F. HIBLER, W.D. KOVACS, A. AND ACKLEY, S; MESOSCALE STRAIN AND ICE MORPHOLOGY (AGOOS) 12 MONTHS \$50,500

MOCK, S. J., AND COLBECK, S. C.; GEOPHYSICAL AND GLACIOLOGICAL FIELDIINVESTIGATIONS IN GREENLAND (AGOOSTS\*); 12 MONTHS \$27,100 LANGWAY, C. C. JR., AND HANSEN, B. L.; ICE CORE DRILLING, ICE CORE ANALYSIS AND GEOPHYSICAL INVESTIGATIONS IN GREENLAND (AGGOSTS); 18 MONTHS \$22,500

BROWN, JERRY; ANALYSIS OF STRUCTURE AND FUNCTION OF THE TUNDRA ECOSYSTEM (CA40000 001); 8 MONTHS \$20,000

### **NEW MEXICO**

### ATOMIC ENERGY COMMISSION-ALBUQUERQUE OPERATIONS OFFICE-ABC

OFTE, DON; STUDY OF A SEASONAL ASYMMETRY IN AURORAL CON-JUGACY (AG00276°); 12 WONTHS \$5,000

### NEW YORK

### AMERICAN GEOGRAPHICAL SOCIETY

PINTHER, MIKLOS; PREPARATION OF A MAP OF THE ARCTIC BASIN (C441004); 12 MONTHS \$53,124

### STATE UNIVERSITY AT ALBANY

STROSS, RAYMOND G; BIOLOGICAL RHYTHMS AND PRODUCTIVITY OF ARCTIC ZOOPLANKTON (VO29547 X01), 12 MONTHS \$18,400



### **HORTH CAROUNA**

DUKE UNIVERSITY

BILLINGS, W D; ROOT GROWTH AND ROOT RESPIRATION IN TUNDRA SOILS AS AFFECTED BY TEMPERATURE (VOSSES X00); 12 MONTHS \$19.800

NORTH CAROLINA STATE UNIVERSITY AT RALEIGH

MOBBLE, JOHN E, AND STANLEY, DONALD W; DEVELOPMENT OF MODELS OF PRIMARY PRODUCTIVITY OF BENTHIC ALGAE AND OF DECOMPOSITION OF ORGANIC MATERIAL BY MICROORGANISMS (VOSSESS X00), 13 MONTHS \$82,700

### OHO

OHIO STATE UNIVERSITY

RUDOLPH, EMANUEL D, AND RASTORFER, JAMES R; PRODUCTIVITY OF TUNDRA LICHENS IN THE PRUDHOE BAY REGION, PHYSIOLOGICAL ECOLOGY OF ARCTIC BRYOPHYTES (VOISES! XOO); 12 MONTHS 819 200

UNIVERSITY OF CINCINNATI

MILLER, MICHAEL C; PRODUCTION AND DECOMPOSITION OF DIS-SOLVED AND PARTICULATE ORGANIC CARBON IN ARCTIC COASTAL PONDS (VOSSES X00), 12 MONTHS \$12,800

### SOUTH DAKOTA

AUGUSTANA COLLEGE

TIESZEN, LARRY L; PHOTOSYNTHESIS, ACCLIMATION AND ORGANIC NUTRIENT FLUX IN THE PRINCIPAL TUNDRA SPECIES AT BARROW, ALASKA (VO1914 X01); 12 MONTHS \$58,500

SIOUX PALLS COLLEGE

BIERLE, DONALD A; DYNAMICS OF FRESHWATER MACROBENTHIC COMMUNITIES IN ARCTIC ALASKA PONDS AND LAKES (VO2024, 2021); 12 MONTHS \$18,500

BIBRLE, DONALD A; DYNAMICS OF MACROBENTHIC COMMUNITIES IN ARCTIC ALASKA PONDS AND LAKES (VO20346 001), \$1,217

#### UTAH

UTAH STATE UNIVERSITY

CALDWELL, MARTYN M; GAS EXCHANGE OF ALPINE TUNDRA SPE-CIES (VOSDSS X01); 12 MONTHS \$21,400

#### VIRGINIA

VIRGINIA POLYTECHNIC INSTITUTE

BENOIT, ROBERT E, AND MILLER, ORSON K JR; DECOMPOSER ACTIVITIES AND COMMUNITY STRUCTURE OF BACTERIA, YEASTS AND BASIDIOMYCETES IN ARCTIC TUNDRA (Y089354 X01): 12 MONTHS \$31,600

### WASHINGTON

UNIVERSITY OF WASHINGTON

UNTERSTEINER, NORBERT; DYNAMICS AND THERMODYNAMICS OF ARCTIC SEA ICE (VOISEOT 001), 12 MONTHS \$309,900

BUSINGER, J A; DIRECT SHEAR STRESS MEASUREMENTS OVER THE ARCTIC PACK ICE (VOISIE); 12 MONTHS \$37,900

### FIELD SUPPORT

### ALASKA

WELLER, GUNTER E; OTHER PROGRAM AWARDS (01AWDS), 12 MONTHS \$37,000

### CALIFORNIA

LITTON INDUSTRIES INC-ARRO PRODUCTS DIVISION

BURDICK, C D; LEASE OF TWO PALLETIZED LTN-51 INERTIAL NAVIGATION (C665000 000); 2 MONTHS \$22,280

BURDICK, C D; INERTIAL NAVIGATION SYSTEMS CONTRACT FOR LEASE OF TWO PALLETIZED LTN-11 (C643000 003); 2 MONTHS \$22,280 BURDICK, C D; TWO INERTIAL NAVIGATION SYSTEMS (C737000\*); 12

MONTHS \$3,832

### CANADA

DEPARTMENT OF ENERGY, MINES AND RESOURCES.

ROOTS, E F; CANADIAN AIR SUPPORT FOR PROJECT AIDJEX (CASSOO); 27 MONTHS \$29,000

### DISTRICT OF COLUMBIA

DEPARTMENT OF NAVY

BETZ, WALTER; INSTALLATION OF ANTENNAS FOR RADIO SOUND-ING EQUIPMENT (CALPOO 001); \$72,000

SET2, WALTER; INSTALLATION OF ANTENNAS FOR RADIO SOUND-ING EQUIPMENT (CA4000 001); 2 MONTHS \$40,000

### DEPARTMENT OF NAVY-OFFICE OF NAVAL RESEARCH

MCGREGOR, M RON; LOGISTIC SUPPORT TO ARCTIC FIELD PROGRAMS (CA75000); 12 MONTHS \$250,000

#### MARYLAND

ZWALLY, H JAY; OTHER PROGRAM AWARDS (GIAWDS); 24 MONTHS \$54,600

RMOING

DAY, CORNELIUS; ANALYSIS OF THE U.S. PROGRAM IN ANTARCTICA (Continuo Cor), 1 MONTHS \$7,118

#### OREGON

NEAL, VICTOR T; OTHER PROGRAM AWARDS (01AWDS); 12 MONTHS 830,900

#### WASHINGTON

BJORNERT, ROLF P: OTHER PROGRAM AWARDS (01AWDS); 12 MONTHS \$30,600

UNIVERSITY OF WASHINGTON

UNTERSTEINER, NORBERT, CONTRACT FOR PLANNING AND OR-GANIZATION OF AN ARCTIC ICE DYNAMICS JOINT EXPERIMENT (C625000 004): 4 MONTHS \$489,612

UNTERSTEINER, NORBERT; PLANNING AND ORGANIZATION OF AN ARCTIC ICE DYNAMICS JOINT EXPERIMENT (COSSOC 005); 10 MONTHS \$258,600

### POLAR INFORMATION SERVICE

### ALASKA

UNIVERSITY OF ALASKA

LUICK, JACK R: FIRST INTERNATIONAL SYMPOSIUM ON REIN-DEERICARIBOU RESEARCH (VOS2740): 6 MONTHS \$10,000

#### DISTRICT OF COLUMBIA

NONE; OTHER PROGRAM AWARDS (06AWDS); \$5,661

AMERICAN GROPHYSICAL UNION

SPILHAUS, A F JR; PUBLICATION OF THE ANTARCTIC RESEARCH SERIES (NOCCOSS 004"); 12 MONTHS \$13,000

ARCTIC INSTITUTE OF NORTH AMERICA

MARTNA, MARET HELGA; ARCTIC BIBLIOGRAPHY PROJECT (VOSSIOO); S MONTHS \$20,000

LIBRARY OF CONGRESS

THURONYI, GEZA; PROTOTYPE POLAR BIBLIOGRAPHY SYSTEM (AGOSTI); 12 MONTHS \$38,600

### MARYLAND

NONE; OTHER PROGRAM AWARDS (01AWDS); \$300

VIRGINIA

NONE; OTHER PROGRAM AWARDS (01AWDS); \$29

# OCEANOGRAPHIC FACILITIES AND SUPPORT

### SHIP OPERATIONS

### ALAVA

UNIVERSITY OF ALASKA-INSTITUTE OF MARI IE SCIENCE

HOOD, D W; CONTINUATION OF SUPPOST FOR CCEANOGRAPHIC VESSEL OPERATION (DOJISIO); 12 MONTHS \$132,900

### CALIFORNIA

UNIVERSITY OF SOUTHERN CALIFORNIA

SAVAGE, JAY M; SUPPORT OF THE RESEARCH VESSEL VELERO IV (DOS1580): 12 MONTHS \$315,700

STANFORD UNIVERSITY-HOPKINS MARINE STATION

GILMARTIN, MALVERN; SUPPORT OF RESEARCH VESSEL OPERA-TIONS (DOSISSE), 6 MONTHS \$100,000

GILWARTIN, MALVERN; PHASE OUT SUPPORT OF THE RIV PROTEUS (DOSISSE 001); 6 MONTHS \$76,300



UNIVERSITY OF CALIFORNIA, SAN DIEGO-SCRIPPS INSTITUTION OF

BENSON, ANDREW A, AND GAREY, WALTER F; SUPPORT FOR PHYSIOLOGICAL RESEARCH SHIP RIV ALPHA HELIX (DOSSESS 001); 6 MONTHS \$166.000

NIBRENBERG, WILLIAM A; PARTIAL SUPPORT OF SHIP OPERA-TIONS FOR RESEARCH AT SEA IN OCEANOGRAPHY (DOSCOL'S); 12 MONTHS \$1,311,000

OAREY, WALTER F; OPERATING SUPPORT FOR RIV ALPHA HELIX (DOJLISS); 11 MONTHS 8550,000

#### **ADISON**

PLORIDA STATE BUILDINGS

HARRISS, ROBERT C; SUPPORT OF RIV TURSIOPS (Dotti74 001); 11 MONTHS \$68,200

### MOTE MARINE LABORATORY

GILBERT, PERRY W; OPERATION OF \$3-FOOT CCEANOGRAPHIC VES-SEL FOR 'USE' IN MARINE BIOLOGICAL RESEARCH (B017114 001); 10 MONTHS \$18.500

#### NOVA UNIVERSITY

RICHARDSON, WILLIAM S; SUPPORT FOR OPERATION OF RIV GULF STREAM (DOS) 109: 12 MONTHS 218 200

UNIVERSITY OF MIAMI-SCHOOL OF MARINE AND ATMOSPHERIC

BADER, RICHARD C; SUPPORT OF RESEARCH VESSELS (DOSISTS); 12 MONTHS \$1,220,800

### GEORGIA

### SKIDAWAY INSTITUTE OF OCEANOGRAPHY

GREENE, ALBERT Q JR; SUPPORT OF UNIVERSITY OF GEORGIA MARINE INSTITUTE AND SKIDAWAY INSTITUTE OF OCEANOGRAPHY RESEARCH VESSELS (DUISSE): 12 MONTHS \$102,900

#### HAWAII

#### UNIVERSITY OF HAWAII

WOOLLARD, GEORGE P; SUPPORT OF SHIP OPERATIONS (DOS1603\*); 12 MONTHS \$279.400

#### MARYIAND

### JOHNS HOPKINS UNIVERSITY

UNIVERSITY OF MICHIGAN

PRITCHARD, DONALD W; OPERATION OF THE RESEARCH VESSELS RIDGELY WARFIELD, MAURY, AND LYDIA LOUISE II (DOTTO 001); \$5,417 PRITCHARD, DONALD W; SUPPORT OF RESEARCH VESSEL OPERA-TIONS (DOJIOT); 12 MONTHS \$119,000

### MASSACHUSETTS

### WOODS HOLE OCEANOGRAPHIC INSTITUTION

MAXWELL, ARTHUR E; SUPPORT FOR THE OPERATION OF RESEARCH VESSELS (D047231 002); \$114200

MAXWELL, ARTHUR E; SUPPORT FOR THE OPERATION OF RESEARCH VESSELS (DOS1983\*); 12 MONTHS \$192,500

### MICHIGAN

CHANDLER, DAVID C; SUPPORT OF SHIP OPERATIONS (DOS1764); 12 MONTHS \$250,000

### **NEW JERSEY**

### ALPINE GEOPHYSICAL ASSOCIATES INC

SMOLEN, WALTER; CONTRACT FOR OPERATION AND MAINTENANCE OF THE RESEARCH VESSEL'ANTON BRUUN', AND FOR ADMINISTRATIVE SUPPORT OF AN OCEANOGRAPHIC RESEARCH PROGRAM (C149000 019); \$1,056

### **NEW YORK**

# COLUMBIA UNIVERSITY-LAMONT-DOHERTY GEOLOGICAL OBSERVATORY

WORZEL, J LAMAR; SHIP OPERATIONS (DO27250 001); \$47,200 WORZEL, J LAMAR; SUPPORT OF SHIP OPERATIONS (DO31705); 12 MONTHS \$740,100

### **NORTH CAROUNA**

### DUKE UNIVERSITY-MARINE LABORATORY

BARBER, RICHARD T; CONTINUATION OF VESSEL OPERATION, RIV EASTWARD (Dotasts 001); \$29,860

BARBER, R. T., AND NEWTON, J. G.; SUPPORT FOR OPERATION OF RIV EASTWARD (Dosesso): 12 MONTHS \$405,000

### **OREGON**

### OREGON STATE UNIVERSITY

BURY, WAYNE V, AND RITTENHOUSE, ELLIS B; RESEARCH VESSEL OPERATIONS (DOS1575\*); 12 MONTHS \$75,600

BURT, WAYNE V; RESEARCH VESSEL OPERATIONS (DOSISTS 001);

#### BEXODE ISLAND

UNIVERSITY OF RHODE ISLAND

KNAUSS, JOHN A; RESEARCH VESSEL OPERATIONS (Dograus CO1°); 12 MONTHS \$290,000

KNAUSS, JOHN A: SUPPLEMENTARY SUPPORT FOR RIV TRIDENT (DOSTS 48 008), 12 MONTHS \$153,800

#### TEXAS

### TEXAS A & M UNIVERSITY

GEYER, RICHARD A; SUPPORT OF SHIP OPERATIONS (DG11790); 12 MONTHS \$488,200

### WASHINGTON

### UNIVERSITY OF WASHINGTON

RICHARDS, FRANCIS A; OCEANOGRAPHIC VESSEL OPERATIONS (DOS1717): 18 MONTHS \$731.000

### SHIP CONSTRUCTION/CONVERSION

#### MASSACHUSETTS

### WOODS HOLE OCEANOGRAPHIC INSTITUTION

MAXWELL, ARTHUR E: CONSTRUCTION OF AN OCEANOGRAPHIC RESEARCH VESSEL (CTAPOOD): 25 MONTHS \$2,800,000

### SPECIALIZED FACILITIES AND FOILIPMENT

#### ALASKA

UNIVERSITY OF ALASKA-INSTITUTE OF MARINE SCIENCE

HOOD, D W; OCEANOGRAPHIC SHIP EQUIPMENT (DOSESS); 18 MONTHS \$15,200

### CALIFORNIA

### UNIVERSITY OF SOUTHERN CALIFORNIA

SAVAGE, JAY M; PLAN FOR CAPITAL IMPROVEMENTS AND EQUIP-MENT OUTFITTING FOR THE RESEARCH VESSEL VELERO IV (D01140); IZ MONTHS 1511 200

UNIVERSITY OF CALIFORNIA, SAN DIEGO-SCRIPPS INSTITUTION OF OCEANOGRAPHY

NIERENBERG, WILLIAM A; CAPITAL EQUIPMENT AND IMPROVE-MENTS FOR RESEARCH VESSELS (DOMESTS); 12 MONTHS \$170,000

FRAUTSCHY, JEFFERY D; CONSTRUCTION OF A PIER AT NIMITE MARINE FACILITY (DOSISON), 15 MONTHS \$724,100

### FLORIDA

### FLORIDA STATE UNIVERSITY

HARRISS, ROBERT C; RESEARCH EQUIPMENT FOR RIV TURSIOPS (DOJEGO); 12 MONTHS \$12,600

UNIVERSITY OF MIAMI-SCHOOL OF MARINE AND ATMOSPHERIC SCIENCES

BADER, RICHARD G. EQUIPMENT TO BE USED ABOARD RESEARCH VESSELS, GILLISS, ISELIN AND CALANUS (DOSSIES), 12 MONTHS \$119,850 BUNT, JOHN S; SHORE FACILITY SUPPORT-MULTI-SAMPLE RECORD-ING SPECTROPHOTOMETER (DOSSIES), 12 MONTHS \$9,000

HAY, WILLIAM W. SHORE FACILITIES SUPPORT-SCANNING ELEC-TRON MICROSCOPE ACCESSORIES (DOS(2)12), 12 MONTHS \$28,700

### GEORGIA

### SKIDAWAY INSTITUTE OF OCEANOGRAPHY

MENZEL, DAVID W; EQUIPMENT FOR OCEANOGRAPHIC YESSEL OPER-TIONS AT THE UNIVERSITY OF GEORGIA MARINE INSTITUTE AND SKIDAWAY INSTITUTE OF OCEANOGRAPHY (DOSEASS); 12 MONTHS \$41,110

### KAWAJI

### UNIVERSITY OF HAWAII

WOOLLARD, GEORGE P; IMPROVING SHIP FACILITIES OF UNIVERSITY OF HAWAII RESEARCH VESSELS, KANA KEOKI AND TERITU (DOSESSE); 12 MONTHS \$76,900

WOOLLARD, GEORGE P; SHORE FACILITIES SUPPORT-SCANNING ELECTRON MICROSCOPE AND ACCESSORIES (DOJUTO); 24 MONTHS 869,000

### MASSACHUSETTS

### WOODS HOLE OCEANOGRAPHIC INSTITUTION

MORSE, ROBERT W: FACILITIES SUPPORT FOR RESEARCH VESSELS DOSERT, 12 MONTHS \$184,400

HUNT, JOHN M; SHORE FACILITIES SUPPORT - MASS SPECTROME-TER (DOSSESSE); 12 MONTHS \$104,000



### MICHIGAN

UNIVERSITY OF MICHIGAN

CHANDLER, DAVID C: EQUIPMENT FOR RESEARCH VESSEL MYSIS (DOSISS); 18 MONTHS \$10,700

#### **NEW YORK**

COLUMBIA UNIVERSITY

Worzel, J Lamar; facilities support for research vessels (Dansis); 18 Months \$124,900

COLUMBIA UNIVERSITY-LAMONT-DOHERTY GEOLOGICAL OBSERVATORY

WORZEL, J. LAMAR: FACILITIES SUPPORT FOR RESEARCH VESSELS (DOISE74 001); \$133,200

### **NORTH CAROUNA**

DUKE UNIVERSITY

BARBER, R. T., SHIPBOARD EQUIPMENT, RIV EASTWARD (DOSESSE); 12 MONTHS \$35,540

DURE UNIVERSITY MARINE LABORATORY

BARBER, RICHARD T; ALTERATION OF RIV EASTWARD TO PROVIDE ADDED LABORATORY AND BERTHING SPACE (DOISSE); 12 MONTHS \$44,660

#### OREGON

OREGON STATE UNIVERSITY

BURT, WAYNE V, AND RITTENHOUSE, ELLIS B; IMPROVEMENT OF ONBOARD SCIENTIFIC EQUIPMENT FOR YAQUINA AND CAYUSE (DASSES); 12 MONTHS \$81,497

#### TEXAS

TEXAS A & M UNIVERSITY

GEYER, RA; RESCUE BOAT OUTFITTING (DOSSES); 12 MONTHS \$3,500

#### WASHINGTON

UNIVERSITY OF WASHINGTON

RICHARDS, FRANCIS A; EQUIPMENT FOR OCEANOGRAPHIC VESSEL OPERATIONS (DOS8378); 12 MONTHS \$29,000

RICHARDS, FRANCIS A: EQUIPMENT FOR OCEANOGRAPHIC VESSEL
OPERATIONS (DOISESTS COI): 12 MONTHS \$96,500

### OTHER FACILITIES AND SUPPORT OPERATIONS

### CALIFORNIA

UNIVERSITY OF CALIFORNIA, SAN DIEGO-SCRIPPS INSTITUTION OF OCEANOGRAPHY

SHOR, GEORGE; SUPPORT OF SHIPBOARD TECHNICIANS (DOSEAST); 12 MONTHS \$91,500

NIEREBBERG, WILLIAM A; SUPPORT FOR DC-3 UTILIZATION IN OCEANOGRAPHY (DOSESSE); 12 MONTHS \$49,920

ROBINSON, MARGARET K; BATHYTHERMOGRAPH DATA PROCESSING GROUP (Daysase); 4 MONTHS \$30,000

ROBINSON, MARGARET K; SUPPORT FOR BATHYTHERMOGRAPH DATA PROCESSING GROUP (DOSESTS 001): 24 MONTHS \$149,000

### DISTRICT OF COLUMBIA

DEPARTMENT OF NAVY-OFFICE OF NAVAL RESEARCH

KIRWAN, A DENNIS; SUPPORT OF THE COMMITTEE ON OCEANOG-RAPHY OF THE NATIONAL ACADEMY OF SCIENCES (AGO0221 002\*); 12 MONTHS \$10,000

### GEORGIA

GREENE, ALBERT JR; OTHER PROGRAM AWARDS (GIAWDS); 14 MONTHS \$29,350

### MASSACHUSETTS

WOODS HOLE OCEANOGRAPHIC INSTITUTION

MORSE, ROBERT W; SUPPORT FOR THE UNIVERSITY-NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM (UNOLS) OFFICE (DOJ1263); 12 MONTHS \$64,250

MORSE, ROBERT W; SUPPORT FOR THE UNIVERSITY-NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM (UNOLS) (DOJIEG OOI); 12 MONTHS 10

SCHROEDER, ELIZABETH H; SUPPORT OF BATHYTHERMOGRAFH PROCESSING GROUP (DOSESSO); 12 MONTHS \$21,600

SCHRÖEDER, ELIZABETH H; SUPPORT OF BATHYTHERMOGRAPH PROCESSING GROUP (DOSSISS 001); 24 MONTHS \$46,700

MORSE, ROBERT W: SUPPORT OF SUBMERSIBLE OPERATIONS (DOJS558); 12 MONTHS \$174,000

MAXWELL, ARTHUR E; SUPPORT OF SHIPBOARD TECHNICIANS AND SHIPBOARD COMPUTING ACTIVITIES (DOMINI); 12 MONTHS \$160,100

HUNT, JOHN M; SHORE FACILITIES SUPPORT - MASS SPECTROME-TER (Dosesse); 12 Months \$10,900

### INTERNATIONAL DECADE OF OCEAN EXPLORATION

#### CALIFORNIA

UNIVERSITY OF CALIFORNIA, SAN DIEGO-SCRIPPS INSTITUTION OF OCEANOGRAPHY

NIERENBERG, WILLIAM A; PARTIAL SUPPORT OF SHIP OPERA-TIONS FOR RESEARCH AT SEA IN OCEANOGRAPHY (DOS1021°); 12 MONTHS \$145,000

#### DISTRICT OF COLUMBIA

NONE; OTHER PROGRAM AWARDS (01AWDS), 1268

DEPARTMENT OF NAVY-OFFICE OF NAVAL RESEARCH

KIRWAN, A DENNIS; SUPPORT OF THE COMMITTEE ON OCEANOG-RAPHY OF THE NATIONAL ACADEMY OF SCIENCES (AGOODE) 002\*); 12 MONTHS \$5,000

#### HAWAII

UNIVERSITY OF HAWAIL

WOOLLARD, GEORGE P; SUPPORT OF SHIP OPERATIONS (DOSIGOS\*); 12 MONTHS \$360,000

#### MARYLAND

NONE; OTHER PROGRAM AWARDS (03AWDS); \$4,080

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION

HESS, WILMOT N. AND HALPERN, DAVID; NEAR SURFACE CIRCULA-TION STUDIES IN A COASTAL UPWELLING ENVIRONMENT (AGG0049 001\*); 13 MONTHS \$310,201

### MASSACHUSETTS

WOODS HOLE OCEANOGRAPHIC INSTITUTION

MAXWELL, ARTHUR E; SUPPORT FOR THE OPERATION OF RESEARCH VESSELS (DOS1881\*); 12 MONTHS \$1,439,000

#### OREGON

OREGON STATE UNIVERSITY

BURT, WAYNE V, AND RITTENHOUSE, ELLIS B; RESEARCH VESSEL OPERATIONS (DOJ1575\*); 12 MONTHS \$336,000

KULM, LAVERNE D; COLLABORATIVE RESEARCH IN AN INVESTIGA-TION OF THE MASCA LITHOSPHERIC PLATE AND ITS INTERACTION WITH THE SOUTH AMERICAN CONTINENTAL BLOCK (X028013 002\*); 12 MONTHS \$57

### RHUDE ISLAND

University of Rhode Island

KNAUSS, JOHN A; RESEARCH VESSEL OPERATIONS (Dogress 001°); 12 MONTHS \$20,000

### VIRGINIA

NONE; OTHER PROGRAM AWARDS (02AWDS); \$5,836

### ENVIRONMENTAL QUALITY

### ALASKA

UNIVERSITY OF ALASKA-INSTITUTE OF MARINE SCIENCE

HOOD, DONALD W; U. S. PARTICIPATION IN INTERNATIONAL SYM-POSIUM ON OCEANOGRAPHY OF THE BERING SEA (X030107); 8 MONTHS \$25,200

GOERINO, JOHN J, AND BURRELL, DAVID C; A SURVEY OF MERCU-RY, CADMIUM, AND LEAD IN MARINE ORGANISMS OF THE ARCTIC OCEAN, BERING SEA, AND NORTH PACIFIC OCEAN (X030188); 12 MONTHS \$44,100

### BERMUDA

BERMUDA BIOLOGICAL STATION FOR RESEARCH INC

BUTLER, JAMES N; TRANSFER OF PERSISTENT POLLUTANTS IN SARGASSUM COMMUNITIES (X032883); 24 MONTHS \$89,100

### CALIFORNIA

CALIFORNIA INSTITUTE OF TECHNOLOGY

PATTERSON, CLAIR C; TRACE METALS IN IDOE BASELINE STUDY SAMPLES WITH SPECIAL EMPHASIS ON LEAD, CADMIUM AND TIN (XGJ129); 12 MONTHS \$19,400

UNIVERSITY OF CALIFORNIA, BERKELEY

RISEBROUGH, ROBERT W; FORMULATION OF MASS BALANCE EQUA-TIONS FOR POLYCHLORINATED BIPHENYLS IN MARINE ECOSYSTEMS (XO32825); 24 MONTHS \$122,000

UNIVERSITY OF SAN DIEGO COORDINATE COLLEGES

RESNICK, 1; CONDUCT SECRETARIAT ACTIVITIES OF INTERNA-TIONAL ORGANIZATION FOR STANDARDIZATION (ISO) TECHNICAL COMMITTEE (TC) 147 (XOS1703); 24 MONTHS \$34,456



UNIVERSITY OF SOUTHERN CALIFORNIA

KU, TEK-LUNG; GEOCHEMICAL OCEAN SECTIONS STUDY - GEOSECS -RADIUM ANALYSES (XOSJESS), 18 MONTHS \$40,600

### UNIVERSITY OF CALIFORNIA, SAN DIEGO-SCRIPPE INSTITUTION OF OCEANOGRAPHY

BAINBRIDGE, ARNOLD E; GEOCHEMICAL OCEAN SECTIONS STUDY-GEOSECS-OFERATIONS GROUP (X082162 DOI); 18 MONTHS \$1,768,900

CRAIO, HARMON; GEOCHEMICAL OCEAN SECTIONS STUDY-GEOSECS-SHIP-BOARD AND LABORATORY MEASUREMENTS (XG84161 091); 18 MONTHS \$356,900

GOLDBERG, EDWARD D, AND LASKER, REUBEN; THE FLUXES OF SYNTHETIC ORGANICS TO THE MARINE ENVIRONMENT AND EXCHANGE RATES OF CHLORINATED HYDROCARBONS AND SIMILAR CHEMICALS IN MARINE FOOD CHAINS (XOSIPIT); 24 MONTHS \$150,000

GOLDBERG, EDWARD D. WORKSHOP TO EVALUATE THE INTERNA-TIONAL DECADE OF OCEAN EXPLORATION BASELINE STUDY (XO34741): 6 WONTHS \$13,600

GOLDBERO, EDWARD D; WORKSHOP TO EVALUATE THE INTERNATIONAL DECADE OF OCEAN EXPLORATION BASELINE STUDY (X018781 001); \$11,000

HENDERSHOTT, MYRL C, DAVIS, RUSS E, AND MUNK, WALTER H; DESIGN OF THE MID-OCEAN DYNAMICS EXPERIMENT ARRAY AS AN INVERSE PROBLEM (XGJ471°); 12 MONTHS 419,890

## YALE UNIVERSITY

TUREKIAN, KARL K; GEOCHEMICAL OCEAN SECTIONS STUDY-GEOSECS-STRONTIUM ANALYSES (X031975); 18 MONTHS \$36,600

#### DISTRICT OF COLUMBIA

NATIONAL ACADEMY OF ENGINEERING

KEIM, 8 RUSSELL; TASK ORDER FOR SUPPORT OF U.S. PARTICIPA-TION IN THE ENGINESHING COMMITTEE ON OCEANIC RESOURCES (ECOR) (C#10#14°); 12 MONTHS \$800

BOLLER, JACK W: SUPPORT OF U.S. PARTICIPATION IN THE EN-GINEERING COMMITTEE ON OCEANIC RESOURCES (ECOR) (Catolia 001); 12 MONTHS \$5,000

### **FLORIDA**

# UNIVERSITY OF MIAMI-SCHOOL OF MARINE AND ATMOSPHERIC SCIENCES

OSTLUND, H GOTE; GEOCHEMICAL OCEAN SECTIONS STUDY-GEOSECS-RADIO-CARBON AND TRITIUM MEASUREMENTS (X088165 901): 18 MONTHS \$146,900

### GEORGIA

### SKIDAWAY INSTITUTE OF OCEANOGRAPHY

WINDOM, HERBERT; THE TRANSFER OF HEAVY METALS THROUGH THE INNER CONTINENTAL SHELF TO THE OPEN OCEAN (XOSSAIS); 24 MONTHS \$184,000

### HAWAH

UNIVERSITY OF HAWAII

KROOPNICK, PETER M; GEOCHEMICAL OCEAN SECTIONS STUDY-GEOSECS-ISOTOPIC MEASUREMENTS IN DISSOLVED INORGANIC CARBON, DISSOLVED OXYGEN, ATMOSPHERIC WATER VAPOR, AND ATMOSPHERIC COS (XOSSISS OOI), 18 MONTHS \$64,200

### LOUISIANA

LOUISIANA STATE UNIVERSITY, BATON ROUGE

CHAN, LUI-HEUNG, AND HANOR, JEFFREY S, DETERMINATION OF BARIUM CONCENTRATION IN OCEAN WATERS COLLECTED AT GEOCHEMICAL OCEAN SECTIONS STUDY (GEOSECS) STATIONS (XOSJOJI); 18 MONTHS \$14,100

### MARYLAND

ATONIC ENERGY COMMISSION

FORSTER, WILLIAM O; STUDY PROGRAM TO IDENTIFY PROBLEMS RELATED TO OCEANIC ENVIRONMENTAL QUALITY - CARIBBEAN AND GULF OF MEXICO (AGOOSTE); 12 MONTHS \$11,000

VOLCHOR, HERBERT L, AND BOWEN, VAUGHAN T; GEOCHEMICAL OCEAN SECTIONS STUDY-GEOSECS-FALLOUT RADIONUCLIDES IN OCEANIC WATER COLUMNS (AGOSTS); 18 MONTHS \$86,000

### NATIONAL BUREAU OF STANDARDS

LAPLEUR, PHILIP D; CERTIFICATION OF STANDARD REFERENCE MATERIALS FOR SUPPORT OF THE INTERNATIONAL DECADE OF OCEAN EXPLORATION (AGOOJAT): 6 MONTHS \$50,000

### NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION

AUSTIN, THOMAS S; DATA MANAGEMENT SERVICES FOR THE IN-TERNATIONAL DECADE OF OCEAN EXPLORATION (AGOOSSE 001°); 12 MONTHS \$46,750

HESS, WILMOT N, AND HALPERN, DAVID: NEAR SURFACE CIRCULA-TION STUDIES IN A COASTAL UPWELLING ENVIRONMENT (ACCOSSS 001% 13 MONTHS \$11,599

### MASSACHUSETTS

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

EDMOND, JOHN M; GEOCHEMICAL OCEAN SECTIONS STUDY-GEOSECS-PARTIAL SUPPORT TO ACT AS ASSISTANT CHIEF SCIENTIST, GEOSECS EXPEDITION (X034976); IR MONTHS \$1,600

EDMOND, JOHN M; OFOCHEMICAL OCEAN SECTIONS STUDY, GEOSECS-HIGH PRECISION BARIUM MEASUREMENTS (XGISGIJ); 18 MONTHS 847,000

WOODS HOLE OCEANOGRAPHIC INSTITUTION

HUNT, JOHN M, AND SPENCER, DEREK W; GEOCHEMICAL OCEAN SECTIONS PROGRAM- CAPITAL EQUIPMENT FOR SHIPBOARD WORK (XOSSIS) 001); \$48,400

SPENCER, DEREK W. AND HUNT, JOHN M. GEOCHEMICAL OCEAN SECTIONS STUDY - GEOSECS -ADMINISTRATIVE AND LOGISTICS ACTIVITIES (XOSSIS) 008); 13 MONTHS \$313,000

HARVEY, GEORGE R; A STUDY PROGRAM TO IDELITIFY PROBLEMS RELATED TO OCEANIC ENVIRONMENTAL QUALITY-NORTH ATLANTIC (X028351 001); \$25,100

MANGELSDORF, PAUL C; GEOCHEMICAL OCEAN SECTIONS STUDY GEOSECS -ANALYSIS OF THE MAJOR IONS IN SEA WATER BY THE
METHOD OF DIFFERENCE CHROMATOGRAPHY (XO19184); 18 MONTHS
\$19,400

SPENCER, DEREK W, AND BREWER, PETER G: GEOCHEMICAL OCEAN SECTIONS STUDY - GEOSECS - TRACE ELEMENT AND PARTICULATE MATTER INVESTIGATIONS (XOSSESS); 18 MONTHS \$162,800

#### **NEW YORK**

### AMERICAN NATIONAL STANDARDS INSTITUTE

RESNICK, I: CONDUCT SECRETARIAT ACTIVITIES OF INTERNA-TIONAL ORGANIZATION FOR STANDARDIZATION (ISO) TECHNICAL COMMITTEE (TC) 117 (X031703 001); \$9,992

### QUEENS COLLEGE

TAKAHASHI, TARO; GEOCHEMICAL OCEAN SECTIONS STUDY GEOSECS CARBONATE CHEMISTRY OF SEA WATER (XOSSES); 18 MONTHS \$38,400

# COLUMBIA UNIVERSITY-LAMONT-DOHERTY GEOLOGICAL OBSERVATORY

BROECKER, WALLACE S, AND BENDER, MICHAEL; BARIUM ANALYSES IN THE GEOSECS PROGRAM (XOISIS) 001); II MONTHS \$34,600 BROECKER, WALLACE S, FEELY, HERBERT, BISCAYE, PIERRE E, AND BENDER, MICHAEL; GEOCHEMICAL OCEAN SECTIONS STUDY-GEOSECS-RADIUM 428 ANALYSES IN ATLANTIC SAMPLES (XO2614) 002); IB MONTHS \$216,188

BROECKER, WALLACE S, AND SENECHAL, RONALD G; GEOCHEMI-CAL OCEAN SECTIONS STUDY-GEOSECS-ANALYSIS OF BARIUM IN GEOSECS ATLANTIC SAMPLES (X022164 004); \$11,000

### OREGON

OREGON STATE UNIVERSITY

BYRNE, JOHN V. AND GORDON, LOUIS I: GEOSECS- AUTOMATED NUTRIENT ANALYSES AND MEASUREMENT OF ORGANIC CARBON (X083167 601°), 12 MONTHS \$9,000

BYRNE, JOHN Y, AND GORDON, LOUIS I; GEOCHEMICAL OCEAN SECTIONS STUDY-GEOSECS-AUTOMATED NUTRIENT ANALYSES AND MEASUREMENT OF ORGANIC CARRON (YORGANIC CARRON)

SUREMENT OF ORGANIC CARBON (XOSSISTORY), 18 MONTHS \$111,800 KULM, LAVERNE D; COLLABORATIVE RESEARCH IN AN INVESTIGATION OF THE NASCA LITHOSPHERIC PLATE AND ITS INTERACTION WITH THE SOUTH AMERICAN CONTINENTAL BLOCK (XOSSISTORY); 12 MONTHS \$24,417

### RHODE ISLAND

UNIVERSITY OF RHODE ISLAND-GRADUATE SCHOOL OF OCEANOGRAPHY

DUCE, ROBERT A: ATMOSPHERIC POLLUTANT TRANSPORT AND DEPOSITION ON THE SEA SURFACE (XOS1717): 24 MONTHS \$377,000

### TEXAS

TEXAS A & M UNIVERSITY

SACKETT, W.M. PRESLEY, B.J. AND GIAM, C.S; A STUDY PROGRAM TO IDENTIFY PROBLEMS RELATED TO OCEANIC ENVIRONMENTAL QUALITY-GULF OF MEXICO AND CARIBBEAN (X030104); 12 MONTHS \$102,000

Univ of texas at Austin-Marine Science institute

PARKER, PATRICK L; A BASE-LINE STUDY OF PETROLEUM DERIVED ORGANIC MATTER FOR THE GULF OF MEXICO (XOSOIOS); 12 MONTHS \$58,700

### WASHINGTON

UNIVERSITY OF WASHINGTON

STUIVER, MINZE; GEOCHEMICALS OCEAN SECTIONS STUDY-GEOSECS-CARBON 14 OCEAN WATER ANALYSES (XOM144 001); 18 MONTHS \$80,600

BATTELLE MEMORIAL INSTITUTE BATTELLE NORTHWEST

ROBERTSON, DAVID E; GEOCHEMICAL OCEAN SECTIONS STUDY-



GEOSECS-CHARACTERIZATION OF GEOGRAPHICAL AND VERTICAL DISTRIBUTION OF A LARGE GROUP OF TRACE ELEMENTS (XO1274); 18 MONTHS \$45,000

### ENVIRONMENTAL FORECASTING

### CALIFORNIA

UNIVERSITY OF CALIFORNIA, SAN DIEGO-SCRIPPS INSTITUTION OF OCEANOGRAPHY

COX, CHARLES S, PARKER, ROBERT L, AND VACQUIER, V; ELEC-TROMAGNETIC STUDIES OF THE OCEAN LITHOSPHERE AND OF THE OCEAN WATER CURRENTS AT THE MODE I SITE (AGGISTI'); 24 MONTHS \$120,200

COX, CHARLES S, PARKER, ROBERT L, AND VACQUIER, V; ELEC-TROMAGNETIC STUDIES OF THE OCEAN LITHOSPHERE AND OF THE OCEAN WATER CURRENTS AT THE MODE I SITE (A03134R 001); \$17,100 HENDERSHOTT, MYRL C; NUMERICAL EVALUATION OF SUGGESTED

MODE-! SITES (XOVI 143); 18 MONTHS \$30,100

NIERENBERO, WILLIAM A; PLANNING GRANT FOR LARGE SCALE AIR-SEA NORTH PACIFIC STUDY (XOSSIS); 6 MONTHS \$27,600

HENDERSHOTT, MYRL C, DAVIS, RUSS E, AND MUNK, WALTER H; DESIGN OF THE MID-OCEAN DYNAMICS EXPERIMENT ARRAY AS AN INVERSE PROBLEM (XOS1477\*); 12 MONTHS \$14,020

### CONNECTICUT

### YALE UNIVERSITY

ROSSBY, T; MODE I- SOFAR FLOAT EXPERIMENT, INVERTED ECHOSOUNDER PROJECT, VERTICAL PROFILES OF HORIZONTAL CURRENTS (X030416); 24 MONTHS \$189,600

ROSSBY, TI MODE-I-MID-OCEAN DYNAMICS EXPERIMENT- CURRENT MEASUREMENTS BY ACOUSTIC TRACKING OF SUBSURFACE FLOATS, AND ACOUSTIC MEASUREMENTS OF THERMOCLINE DEPTH (XOSOLIE 601), 17 MONTHS 881,800

### UNIVERSITY OF CONNECTICUT-MARINE SCIENCES INSTITUTE

GARVINE, RICHARD W; EKMAN DYNAMICS STUDIES IN THE COASTAL UPWELLING EXPERIMENT (CUE) (XOSELI); 12 MONTHS \$12,700

### DISTRICT OF COLUMBIA

### NATIONAL ACADEMY OF ENGINEERING

KEIM, S RUSSELL; TASK ORDER FOR SUPPORT OF U.S. PARTICIPA-TION IN THE ENGINEERING COMMITTEE ON OCEANIC RESOURCES (ECOR) (C\$10213\*), 12 MONTHS \$850

### NATIONAL ACADEMY OF SCIENCES

VETTER, RICHARD C, AND KEIM, S RUSSELL; SUPPORT OF THE NASOAB-NAEMB PLANNING PANEL ON THE INTL DECADE OF OCEAN EXPLORATION (C\$10\$17 001); 1 MONTHS \$1,973

### DEPARTMENT OF NAVY-OFFICE OF NAVAL RESEARCH

PAULI, DENZIL; SUPPORT OF THE NATIONAL ACADEMY OF ENGINEERING MARINE BOARD (AGOORS) 001); 12 MONTHS \$4,000

KIRWAN, A D JR; SMALL OCEAN DATA STATION (SQDS) (AG00350); 12 MONTHS \$250.000

HOLMQUIST, C O; THE NORTH PACIFIC EXPERIMENT (NORPAX)IN-TERNATIONAL DECADE OF OCEAN EXPLORATION AND OFFICE OF NAVAL RESEARCH JOINT PROGRAM (CA88000); 12 MONTHS \$3,050,000

### FLORIDA

NATIONAL MARINE PISHERIES SERVICE-TROPICAL ATLANTIC BIOLOGICAL LAB-NMFS

HANSEN, D. V., AND CREASE, J.; MID-OCEAN DYNAMICS EXPERIMENT (MGDE) DENSITY PROGRAM (AGOOSES): 24 MONTHS \$645,900

UNIVERSITY OF MIAMI-SCHOOL OF MARINE AND ATMOSPHERIC SCIENCES

MODERS, C. N. K; FRONTAL CIRCULATION AND MIXING IN CONJUNC-TION WITH COASTAL UPWELLING EXPERIMENT (CUE) (X031241); 12 MONTHS \$21,800

MODERS, C. N. K. AND VAN LEER, JOHN C: FRONTAL CIRCULATION AND MIXING IN CONJUNCTION WITH COASTAL UPWELLING EXPERIMENT (CUE) (X031184 001): \$34,800

### MARYLAND

### JOHNS HOPKINS UNIVERSITY

BRETHERTON, FRANCIS P. AN EXPLORATORY STUDY OF SYNOPTIC MAPS FOR MODE-I (X030118), 12 MONTHS \$35,200

BRETHERTON, FRANCIS P. AN EXPLORATORY STUDY OF SYNOPTIC MAPS FOR THE MID-OCEAN DYNAMICS EXPERIMENT-I (XQI0119 001); 12 MONTHS \$88,000

### NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION

AUSTIN, THOMAS S; DATA MANAGEMENT SERVICES FOR THE IN-TERNATIONAL DECADE OF OCEAN EXPLORATION (AGOOMS 001°): 12 MONTHS \$46,750

WHITE, ROBERT M, AND OSTAPOFF, FEODOR; AIR-SEA INTERACTION AND THE MIXED LAYER IN THE OCEAN (AGOOIST): 12 MONTHS \$45,300 HESS, WILMOT N, AND HALPERN, DAVID; NEAR SURFACE CIRCULA-TION STUDIES IN A COASTAL UPWELLING ENVIRONMENT (AG00899); 18 MONTHS 11M 300

HESS, WILMOT N, AND HALPERN, DAVID; NEAR SURFACE CIRCULA-TION STUDIES IN A COASTAL UPWELLING ENVIRONMENT (AGOOSS 001\*); 13 EONTHS \$102,300

### MASSACHUSETTS

### HARVARD UNIVERSITY

BAKER, D JAMES JR; MODE-1-MID-OCEAN DYNAMICS EXPERIMENT-DEEP-SEA PRESSURE AND ATMOSPHERIC MEASUREMENTS (X028816 601): 80 MONTHS 4172,600

ROBINSON, ALLAN R; MODE I THEORETICAL STUDIES AND NUMERI-CAL MODELS (X02903) 001); \$6,000

ROBINSON, ALLAN B; ANALYTICAL AND NUMERICAL STUDIES OF MESOSCALE MOTIONS BY THE THEORETICAL PANEL FOR THE MID-OCEAN DYNAMICS EXPERIMENT (X099035 008); 12 MONTHS 860,900

### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

WUNSCH, CARL; MODE-MID OCEAN DYNAMICS EXPERIMENT-MOORED THERMAL ARRAY (XC9903) 061); 30 MONTHS \$489,100

STOMMEL, HENRY M; ADMINISTRATION OF THE MID-OCEAN DYNAMICS EXPERIMENT (X019031 001); 12 MONTHS \$181,300

### WOODS HOLE OCEANOGRAPHIC INSTITUTION

FOFONOFF, N P. SCHMITZ, W J, AND WEBSTER, FERRIS; MID OCEAN DYNAMICS EXPERIMENT MOORED CURRENT METER ARRAY (XOSIOSI 001); \$210,300

HASSELMANN, KLAUS F; INVESTIGATION OF INTERACTIONS BETWEEN SHORT INTERNAL GRAVITY WAVES AND LARGER SCALE MOTIONS IN THE OCEAN (X030109); 12 MONTHS \$37,800

WEBB, DOUGLAS C; MODE- SOFAR FLOAT EXPERIMENT (X030280); 36 MONTHS \$461,500

VOORHIS, ARTHUR D, AND WEBB, DOUGLAS C; MID-OCEAN DYNAMICS EXPERIMENT I- NEUTRALLY BUOYANT FLOAT EXPERIMENT (XOSOSIO 001); 6 MONTHS \$45,600

WEBB, DOUGLAS C; MODE I-VERTICAL PROFILES OF HORIZONTAL CURRENTS (X000115); 36 MONTHS \$83,200

WELANDER, PIERRE; MODE-I- THEORETICAL-NUMERICAL STUDY OF GEOSTROPHIC EDDY MOTIONS IN THE OCEAN (X050785); 6 MONTHS \$13,700

WALDEN, ROBERT G, AND BERTEAUX, HENRI O; MODE-I-HYDROPHONE ARRAYS FOR TRACKING SOFAR FLOATS (XOSSTI); 12 MONTHS \$108,600

WEBSTER, FERRIS; MID-OCEAN DYNAMICS EXPERIMENT-PHASE I-HOT LINE (X032031); 24 MONTHS \$33,400

KAT2, ELI J; MODE OBSERVATIONS OF AN ISOPYCNAL SURFACE (XOJ1906); 24 MONTHS \$106,800

### NEW YORK

### COLUMBIA UNIVERSITY

POCHAPSKY, T E; MODE I- DEEP OCEAN CURRENT FINE STRUCTURE (XOSOBIT); 30 MONTHS \$47,000

# COLUMBIA UNIVERSITY-LAMONT-DOHERTY GEOLOGICAL OBSERVATORY

HAYS, JAMES D: PALEO-OCEANOGRAPHIC STUDIES OF LATE QUATERNARY OCEAN CIRCULATION AND CLIMATE IN THE NORTHERN ATLANTIC AND PACIFIC OCEANS (XG46471 GG1), 12 MONTHS \$431,000

### OREGON

### OREGON STATE UNIVERSITY

BYRNE, JOHN V. AND GORDON, LOUIS I; GEOSECS- AUTOMATED NUTRIENT ANALYSES AND MEASUREMENT OF ORGANIC CARBON (X028167 001°); 12 MONTHS \$9,800

MOORE, THEODORE C JR; PALEO-OCEANOGRAPHIC STUDIES OF LATE QUATERNARY OCEAN CIRCULATION AND CLIMATE IN THE NORTHERN ATLANTIC AND PACIFIC OCEANS (X022673 DOI); 12 MONTHS \$157,700

SMITH, ROBERT L, AND O'BRIEN, JAMES J: MESOSCALE DYNAMICS IN A COASTAL UPWELLING REGION (X022746 201); \$198,600

SMITH, ROBERT L, AND O'BRIEN, JAMES J; MESOSCALE DYNAMICS IN A COASTAL UPWELLING REGION (X048746 002); 12 MONTHS \$479,700

### RHODE ISLAND

### BROWN UNIVERSITY

IMBRIE, JOHN; PALEO-OCEANOGRAPHIC STUDIES G ? LATE QUATERNARY OCEAN CIRCULATION CLIMATE IN THE NORTE. SRN ATLANTIC AND PACIFIC OCEANS (X022472 001); 12 MONTHS \$132,100

UNIVERSITY OF RHODE ISLAND-GRADUATE SCHOOL OF OCEANOGRAPHY

STURGES, WILTON, AND KNAUSS, JOHN A: MODE-I- BOTTOM-MOUNTED CURRENT METER ARRAY (XOJIS40); 26 MONTHS \$245,300



#### TEXAS

MERRILL, WILLIAM J JR; OTHER PROGRAM AWARDS (GIAWDS); 15 MONTHS \$42,850

### RICE UNIVERSITY

STEBBINGS, R F, AND SPICER, R J; INVESTIGATION OF THE APPLICATION OF RAMAN SPECTROSCOPY TO QUANTITATIVE ANALYSIS OF SEA WATER (XOJ605); 12 MONTHS \$18,400

### SEA-BED ASSESSMENT

### CALIFORNIA

UNIVERSITY OF CALIFORNIA. SAN DIEGO-SCRIPPS INSTITUTION OF OCEANOGRAPHY

MENARD, HENRY W, AND BRUNE, JAMES N; GEOLOGY AND GEOPHYSICS OF THE GULF OF CALIFORNIA (XO)1704); 12 MONTHS \$148,800

### DISTRICT OF COLUMBIA

### GROLOGICAL SURVEY

BERRYHILL, HENRY L JR; SEABED ASSESSMENT PROGRAMS- EAST-ERN CARIBBEAN SEA, GULF OF MEXICO, BERING SEA, AND WEST AFRICAN SHELF (AGO0835 001); 12 MONTHS \$323,500

### NATIONAL ACADEMY OF ENGINEERING

KEIN, S RUSSE'LL; TASK ORDER FOR SUPPORT OF U.S. PARTICIPA-TION IN THE ENGINEERING COMMITTEE ON OCEANIC RESOURCES (ECOR) (C310219\*); 12 MONTHS \$850

#### NATIONAL ACADEMY OF SCIENCES

VETTER, RICHARD C, SUPPORT OF A WORKSHOP ON DYNAMICS OF THE MID-ATLANTIC RIDGE (CS10222); 12 MONTHS \$36,600

#### HAWAII

### UNIVERSITY OF HAWAIL

WOOLLARD, GEORGE P; AN INVESTIGATION OF THE NASCA LITHO-SPHERIC PLATE AND ITS INTERACTION WITH THE SOUTH AMERICAN CONTINENTAL BLOCK (XOSSES, COL): \$1,500

#### MARYLAND

### NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION

AUSTIN, THOMAS S; DATA MANAGEMENT SERVICES FOR THE IN-TERNATIONAL DECADE OF OCEAN EXPLORATION (AGGORDS 001°); 12 MONTHS \$46,750

HESS, WILMOT N. AND HALPERN, DAVID; NEAR SURFACE CIRCULA-TION STUDIES IN A COASTAL UPWELLING ENVIRONMENT (AGO0899 001°); 13 MONTHS \$8,050

WHITE, ROBERT M, AND BURNS, ROBERT E; AN INVESTIGATION OF THE NASCA LITHOSPHERIC PLATE (AGOODED): 48 MONTHS \$338,000

### MASSACHUSETTS

### WOODS HOLE OCEANOGRAPHIC INSTITUTION

EMERY, K 0; THE EASTERN ATLANTIC CONTINENTAL MARGIN (X028183 COI); 24 MONTHS \$586,900

HEIRTZLER, JAMES; MID ATLANTIC RIDGE PLANNING CON-FERENCE (X011717); 6 MONTHS \$9,100

### NEW YORK

# COLUMBIA UNIVERSITY-LAMONT-DOHERTY GEOLOGICAL OBSERVATORY

EWING, MAURICE; WORLD'S SEABED MANGANESE DEPOSITS, DISTRIBUTION, ORIGIN, GROWTH AND EVALUATION (X030673); 6 MONTHS \$19.200

EWING, MAURICE: WORLD'S SEABED MANGANESE DEPOSITS, DISTRIBUTION, ORIGIN, GROWTH AND EVALUATION (X636675 001); 6 MONTHS \$12.14

GERARD, ROBERT; ESTABLISH A COORDINATOR'S OFFICE, RESOURCES OF THE SEABED AND PUBLISH EXISTING DATA ON ENGINEERING, PHYSICAL, AND CHEMICAL DATA ON THE SEABED (XOJSIS): 12 MONTHS \$90,700

BRYAN, GEORGE M, EWING, M, TALWANI, M, PITMAN, W, AND HAYES, D; A GEOPHYSICAL STUDY OF THE CONTINENTAL MARGIN OF ARGENTINA AND BRAZIL (XO34110), 12 MONTHS \$345,400

GERARD, ROBERT D; FERROMANGANESE DEPOSITS OF THE OCEAN FLOOR AN INTER-UNIVERSITY PROGRAM OF RESEARCH (X054659); 12 MONTHS \$191,600

### OREGON

### OREGON STATE UNIVERSITY

KULM, LA VERNE D; AN INVESTIGATION OF THE NASCA LITHO-

SPHERIC PLATE AND ITS INTERACTION WITH THE SOUTH AMERICAN CONTINENTAL BLOCK (X022675 001), \$7,900

KULM, LAVERNE D. COLLABORATIVE RESEARCH IN AN INVESTIGA-TION OF THE NASCA LITHOSPHERIC PLATE AND ITS INTERACTION WITH THE SOUTH AMERICAN CONTINENTAL BLOCK (X088675 002\*); 12 MONTHS \$128,814

### LIVING RESOURCES

#### MARYLAND

NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION

AUSTIN, THOMAS S; DATA MANAGEMENT SERVICES FOR THE IN-TERNATIONAL DECADE OF OCEAN EXPLORATION (AGOOMS 001°); 12 MONTHS \$46,150

HESS, WILMOT N. AND HALPERN, DAVID; NEAR SURFACE CIRCULA-TION STUDIES IN A COASTAL UPWELLING ENVIRONMENT (AGOODS: 001°); 13 MONTHS \$2,850

### WASHINGTON

UNIVERSITY OF WASHINGTON

DUGDALE, RICHARD C; COASTAL UPWELLING ECOSYSTEMS ANALY. SIS PROGRAM (CUEA) (XOSISON); 20 MONTHS \$907,000

#### WISCONSIN

INSTITUTE OF ECOLOGY

HASLER, ARTHUR D. CONSULTATIVE SERVICES FOR THE LIVING RESOURCES PROGRAM OF THE INTERNATIONAL DECADE OF OCEAN EXPLORATION (X034878): 12 MONTHS \$20,400

## OTHER NATIONAL AND SPECIAL PROGRAMS

### OCEAN SEDIMENT CORING PROGRAM

### CAUPORNIA

GALEHOUSE, JON S; OTHER PROGRAM AWARDS (01AWDS): 12 WONTHS \$37,220

UNIVERSITY OF CALIFORNIA, SAN DIEGO

NIERENBERG, WILLIAM A; DRILLING OF SEDIMENTS IN THE PACIFIC AND ATLANTIC OCEANS AND ADJACENT SEAS, NSF-C481 (C48000 047); \$367,501

NIERENBERG, WILLIAM A; DRILLING OF SEDIMENTS IN THE PACIFIC AND ATLANTIC OCEANS AND ADJACENT SEAS, CONTRACT NSF-C182 (C182000 028); \$250,000

UNIVERSITY OF CALIFORNIA, SAN DIEGO-SCRIPPS INSTITUTION OF OCEANOGRAPHY

NIERENBERG, WILLIAM A: DRILLING OF SEDIMENTS IN THE PACIFIC AND ATLANTIC OCEANS AND ADJACENT SEAS (C. 18000, 082): 12 MONTHS \$1,800,000

NIERENBERG, WILLIAM A; DRILLING OF SEDIMENTS IN THE PACIFIC AND ATLANTIC OCEANS AND ADJACENT SEAS, NSF-C-488 (C482000 023); \$3,500,000

NIERENBERG, WILLIAM A; DRILLING OF SEDIMENTS IN THE PACIFIC AND ATLANTIC OCEANS AND ADJACENT SEAS, NSF C-482 (C482000 025); 5 MONTHS \$3,000,000

### DISTRICT OF COLUMBIA

NONE; OTHER PROGRAM AWARDS (10A1/DS): \$233,279

### MARYLAND

DEPARTMENT OF COMMERCE-NATIONAL OCEANIC ATMOSPHERIC ADMINISTRATION-WEATHER BUREAU

KORNMANN, ALLAN G; METEOROLOGICAL SUPPORT OF THE DEEP SEA DRILLING OPERATIONS (CAGTOOD OG); 14 MONTHS \$52,00)

### **NEW YORK**

COLUMBIA UNIVERSITY-LAMONT-DOHERTY GEOLOGICAL OBSERVATORY

EWING, JOHN I; SURVEYS OF DSDP DRILLING SITES (A028338 002); \$10,000

### INTERNATIONAL BIOLOGICAL PROGRAM

### ALASKA

UNIVERSITY OF ALASKA

WEST, GEORGE C; THE STRUCTURE AND FUNCTION OF THE TUN-DRA ECOSYSTEM (VOSPIA XOZ\*), 12 MONTHS \$330,000

### ARIZONA

UNIVERSITY OF ARIZONA

LOWE, CHARLES H; COLLABORATIVE RESEARCH ON STRUCTURE OF ECOSYSTEMS, PART 1 (8017153 001); 12 MONTHS \$38,600



### CALIFORNIA

### CALIFORNIA STATE UNIVERSITY, BAN DIEGO

JOHNSON, ALBERT W. COLLABORATIVE RESEARCH ON STRUCTURE OF ECOSYSTEMS, PART 4 (B047141 001); 12 MONTHS \$173,000

### STANFORD UNIVERSITY

MOONEY, HAROLD A; COLLABORATIVE RESEARCH ON STRUCTURE OF ECOSYSTEMS, PART 5 (B087151 001); 12 MONTHS \$19,000

### UNIVERSITY OF CALIFORNIA. BERKELEY

COLWELL, ROBERT K; COLLABORATIVE RESEARCH ON STRUCTURE OF ECOSYSTEMS, PART II (BOSIDS); 12 MONTHS \$15,000

HUFFAKER, C B; THE PRINCIPLES, STRATEGIES AND TACTICS OF PEST POPULATIOI: AFGULATION AND CONTROL IN MAJOR CROP ECOSYSTEMS (BO34718); 10 MONTHS \$300,000

### UNIVERSITY OF CALIFORNIA, DAVIS

BARBOUR, MICHAEL O; COLLABORATIVE RESEARCH ON STRUCTURE OF ECOSYSTEMS, PART 10 (BOSTISE); 12 MONTHS \$9,000

### UNIVERSITY OF CALIFORNIA, LOS ANGELES

THROWER, NORMAN J W; COLLABORATIVE RESEARCH ON STRUCTURE OF ECOSYSTEMS, PART # (BO#7154 001): 12 MONTHS \$27,500

### UNIVERSITY OF CALIFORNIA, RIVERSIDE

ASC: IMANN, H HOMER; COLLABORATIVE RESEARCH ON STRUC-TURE OF ECOSYSTEMS, PART 9 (B087155 001); 12 MONTHS \$9,800

DEBACH, PAUL; THE ROLE OF ENTOMOPHAGOUS INSECTS IN POPULATION REGULATION OF ARMORED SCALE INSECTS (BOSSIA X00); 12 MONTHS \$40,000

### UNIVERSITY OF CALIFORNIA, SANTA CRUZ

MOLDENKE, ANDREW R; COLLABORATIVE RESEARCH ON STRUCTURE OF ECOSYSTEMS, PART 18 (BOJ1141); 12 MONTHS \$14,000

#### COLORADO

### COLORADO STATE UNIVERSITY

"VANDYNE, GEORGE M; ANALYSIS OF STRUCTURE, FUNCTION, AND UTILIZATION OF GRASSLAND ECOSYSTEMS (BOSISSE XOO), 12 MONTHS \$2,053,000

VAN DYNE, GEORGE M; ANALYSIS OF STRUCTURE, FUNCTION, AND UTILIZATION OF GRASSLAND ECOSYSTEMS (BOISES X61), \$2,000

### UNIVERSITY OF COLORADO

NICHOLS, HARVEY; CONTEMPORARY ATMOSPHERIC TRANSPORT AND FALLOUT OF BOREAL FOREST POLLEN IN THE CANADIAN NORTHWEST TERRITORIES (BOSISST); 12 MONTHS \$35,500

### CONNECTICUT

### UNIVERSITY OF CONNECTICUT

LAUGHEIN, WILLIAM S; ALEUT ADAPTATION TO THE BERING LAND BRIDGE COASTAL CONFIGURATION (BOSSESS CJ)); 12 MONTHS \$133,800

### DISTRICT OF COLUMBIA

### NATIONAL ACADEMY OF SCIENCIS

OLIVER, RICHARD H; SUPPORT OF THE U.S. NATIONAL COMMITTEE FOR THE INTERNATIONAL BIOLOGICAL PROGRAM (C\$10098 014); 11 MONTHS \$150,000

### SMITHSONIAN INSTITUTION

HURD, PAUL D JR; COLLABORATIVE RESEARCH ON STRUCTURE OF RCOSYSTEMS, PART IS (BOSLIE); 12 MONTES \$10,600

### GEORGIA

### UNIVERSITY OF GEORGIA

ROSS, HERBERT H; COLLABORATIVE RESEARCH ON STRUCTURE OF ECOSYSTEMS, PART 14 (BO31192); 12 MONTHS \$13,200

### HAWAII

### BERNICE P BISHOP MUSEUM

GRESSITT, J LINSLEY: COLLABORATIVE RESEARCH ON STABILITY AND EVOLUTION OF ISLAND ECOSYSTEMS (BOG)073 001); 12 MONTHS \$119,000

### UNIVERSITY OF HAWAII

BERGER, ANDREW J, AND MUELLER-DOMBOIS, D; COLI.ABORATIVE RESEARCH ON STABILITY AND EVOLUTION OF ISLAND ECOSYSTEMS (BOLISSO 001): 12 MONTHS \$205,100

BERGER, ANDREW J; STABILITY AND EVOLUTION OF ISLAND ECOSYSTEMS (BOILESO 003); 3 MONTHS \$5,200

### ILLINOIS

### UNIVERSITY OF ILLINOIS AT URBANA

SELANDER, RICHARD B; COLLABORATIVE RESEARCH ON STRUCTURE OF ECOSYSTEMS, PART 16 (BOSTION); 12 MONTHS \$11,400

# UNIVERSITY OF ILLINOIS AT URBANA-AGRICULTURAL EXPERIMENT STATION

DRAPER, HAROLD H; NUTRITION OF ESKIMOS IN NORTHERN ALASKA (Botsies 001); 12 MONTHS \$41,800

#### MARYLAND

### ATOMIC ENERGY COMMISSION

NEEL, JAMES V: AREA PROGRAM IN POPULATION GENETICS (AGOOMO 004); 12 MONTHS \$162,200

#### JOHNS HOPKINS UNIVERSITY

RAY, G CARLETON; BIOLOGICAL BASIS OF PRODUCTIVITY AND CON-SERVATION IN MARINE MAMMALS (BOSMOS), 12 MONTHS \$64,900

#### MASSACHUSETTS

#### HARVARD UNIVERSITY-HERBARIUM

SOLBRIG, OTTO T; COLLABORATIVE RESEARCH ON STRUCTURE OF ECOSYSTEMS, PART 1 (B027148 001); 12 MONTHS \$46,900 SOLBRIG, OTTO T; COLLABORATIVE RESEARCH ON STRUCTURE OF

ECOSYSTEMS, PART & (B027150 001); 12 MONTHS \$45,400

#### NORTH CAROUNA

#### DUKE UNIVERSITY

CULBERSON, WILLIAM L; COLLABORATIVE RESEARCH ON STRUC-TURE OF ECOSYSTEMS, PART # (BOS117#), 12 MONTHS \$20,000

#### PENNSYLVANIA

### PENNSYLVANIA STATE UNIVERSITY

BAKER, PAUL 5; COORDINATION OF IRPS IN THE HUMAN ADAPTA-BILITY COMPONENT OF THE USHBP (BOSTOSS COI); 12 MONTHS \$75,300

#### TENNESSEE

### OAK RIDGE NATIONAL LABORATORY

AUERBACH, STANLEY I; ANALYSIS OF THE STRUCTURE AND FUNCTION OF ECOSYSTEMS IN THE DECIDUOUS FOREST BIOME (AGO0189 004); 12 MONTHS \$1,992,300

#### TEXAS

### UNIV OF TEXAS AT AUSTIN

BLAIR, W FRANK; COLLABORATIVE RESEARCH ON STRUCTURE OF ECOSYSTEMS, PART 6 (BOSTISS CO.); 12 MONTHS \$96,000

BLAIR, W FRANK; COORDINATION OF INTEGRATED RESEARCH PROGRAMS IN THE ENVIRONMENTAL MANAGEMENT COMPONENT OF THE US/IBP (B09749) 001); 12 MONTHS \$117,000

### UTAH

### UTAY STATE UNIVERSITY

GOODALL, DAVID W; ANALYSIS OF STRUCTURE AND FUNCTION OF DESERT ECOSYSTEMS (BOSSISS X00); 12 MONTHS \$1,402,000

### WASHINGTON

### UNIVERSITY OF WASHINGTON

DUGDALE, RICHARD C; DYNAMICS OF BIOLOGICAL PRODUCTION IN UPWELLING ECOSYSTEMS (RAIASES 002); 12 MONTHS \$180,000

GESSEL, STANLEY P. CONIFEROUS FOREST BIOME (BO20063 001): 6 MONTHS \$166,600

GESSEL, STANLEY; CONIFEROUS FOREST BIOME, (BORODES 002): 12
MONTHS \$1,270,000

GESSEL, STANLEY; WESTERN CONIFEROUS FOREST BIOME (BORGS65) \$37,000

ORIANS, GORDON H; COLLABORATIVE RESEARCH ON STRUCTURE OF ECOSYSTEMS, PART 13 (B031193); 12 MONTHS \$35,000

### GLOBAL ATMOSPHERIC RESEARCH PROGRAM

### CALIFORNIA

### UNIVERSITY OF CALIFORNIA, LOS ANGELES

YANAI, MICHIO: DYNAMICS OF TROPICAL WAVE DISTURBANCES (A031894); 24 MONTHS \$124,100

MINTZ, YALE, AND ARAKAWA, AKIO; NUMERICAL SIMULATION OF THE ATMOSPHERIC GENERAL CIRCULATION (A01406 X00); 6 MONTHS 8180 200

# UNIVERSITY OF CALIFORNIA, SAN DIEGO-SCRIPPS INSTITUTION OF OCEANOGRAPHY

FOSTER, THEODORE D, AND REARWIN, STEPHEN; AIR-SEA IN-TERACTION STUDIES - MEASUREMENT OF THE TOTAL HEAT FLOW FROM THE SEA SURFACE (A027581 001); 12 MONTHS \$61,000

### COLORADO

### COLORADO STATE UNIVERSITY

BAER. FERDINAND; LARGE-SCALE ATMOSPHERIC FLOW UTILIZING SPECTRAL EQUATIONS (A011637 001); 12 MONTHS \$94,600



COX, STEPHEN K, AND VONDER HAAR, THOMAS H; REDUCTION AND ANALYSIS OF THE WISCONSIN RADIATION EXPERIMENT DATA COL-LECY 3D DURING BOMEX (AGISTS COI); \$14,000 COX, STEPHEN K, AND VONDER HAAR, THOMAS H; REDUCTION AND

COX, STEPHEN K, AND VONDER HAAR, THOMAS H; REDUCTION AND ANALYSIS OF THE WISCONSIN RADIATION EXPERIMENT DATA COL-LECTED DURING BOMEX (A01878) 000); \$20,300

VONDER HAAR, THOMAS H; USE OF SATELLITE OBSERVATIONS IN SUPPORT OF THE SCIENCE OBJECTIVES OF METEOROLOGICAL FIELD PROGRAMS (AGJISSS); 12 NONTHS 134500

GRAY, WILLIAM M; STUDIES OF CUMULUS HEATING AND THE CISK MECHANISM (ACCESSED XOO), 12 MONTHS \$88,000 RIBHL, HERBERT: MESOSCALE ASPECTS OF SYNORTIC

RIBHL, HERBERT; MESOSCALE ASPECTS OF SYNOPTIC DISTURBANCES OVER A TROPICAL CONTINENT (ASSISS), 12 MONTHS 29,400

### CONNECTICUT

### CENTER FOR THE ENVIRONMENT AND MAN INC

PANDOLFO, JOSEPH P; NUMERICAL MODEL STUDIES OF THE PLANETARY JOUNDARY LAYERS OF THE ATMOSPHERE AND OCEANS (AMITEL OCI); \$44,500

ROBINSON, G D; VALIDITY OF METEOROLOGICAL PREDICTION EQUATIONS AND THE SPECTRUM OF ATMOSPHERIC MOTION (AMERIT 001); \$16,600

### DISTRICT OF COLUMNA

NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL SIEVERS, JOHN R; ACTIVITIES OF THE U. S. COMMITTEE FOR THE GLOBAL ATMOSPHERIC RESEARCH PROGRAM (CJ10187 001); 12 MONTHS

### PLORIDA

### FLORIDA STATE UNIVERSITY

\$26,700

KRISHNAMURTI, T N: GLOBAL TROPICAL WEATHER SYSTEMS (A017882 001); 24 MONTHS \$117,000

KRISHNAMURTI, T N; GLOBAL TROPICAL WEATHER SYSTEMS

STEPHENS, JESSE J; FOUR-DIMENSIONAL METEOROLOGICAL DATA ANALYSIS FOR THE GLOBAL ATMOSPHERIC RESEARCH PROGRAM (A01234): 24 MONTHS \$24,400

GLEESON, THOMAS A; PREDICTABILITY IN METEOROLOGY (A032535); 24 MONTHS \$46,800

# UNIVERSITY OF MIAMI-SCHOOL OF MARINE AND ATMOSPHERIC SCIENCES

PROSPERO, JOSEPH M; A STUDY OF THE STRUCTURE AND DYNAMICS OF THE AFRICAN DUST LAYER OVER THE EQUATORIAL ATLANTIC OCEAN DURING BOMEX (A031101): 12 MONTHS \$24,500

ESTOQUE, MARIANO A; WAVE DISTURBANCES IN THE TROPICAL AT-LANTIC (A631613): 12 MONTHS 250 900

KRAUS, ERIC B; PATTERNS OF CONVECTION AND THE EVOLUTION OF STRATIFICATION IN LOW LATITUDES (ACMIDAL); 12 MONTHS \$110,000

### RUNOIS

### UNIVERSITY OF CHICAGO

FUJITA, T THEODORE; MESOSCALE CLOUD MOTION FIELDS FOR GATE/GARP PROGRAM (A011539); 24 MONTHS \$91,000

KAPLAN, LEWIS D; INFRARED FLUX IN THE EARTH'S ATMOSPHERE (A039931); 24 MONTHS 4113,100

### MARYLAND

### UNIVERSITY OF MARYLAND, COLLEGE PARK

RODENHUIS, DAVID R; EQUATORIAL WAVES DRIVEN BY CONVECTION (A055778); 24 MONTHS \$39,900

### MASSACHUSETTS

### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

LORENZ, EDWARD N; INVESTIGATION OF THE PREDICTABILITY OF THE ATMOSPHERE AND OTHER SYSTEMS (A022201 X01): 12 MONTHS 458,500

CHARNEY JULE G; DYNAMICS OF LARGE-SCALE ATMOSPHERIC AND OCEANIC PROCESSES (A018784 X01); 12 MONTHS \$132,100

### OCEAN ATMOSPHERE RESEARCH INSTITUTE

SCHELL, IRVING I; LARGE-SCALE INERTIAL OCEAN-ATMOSPHERE RELATIONSHIPS AND THEIR SIGNIFICANCE FOR LONG-RANGE FORESHADOWING (A011804 001); 24 MONTHS 479,200

### WOODS HOLE OCEANOGRAPHIC INSTITUTION

BUNKER, A F; TURBULENCE AND FLUXES IN THE BOUNDARY LAYERS OF UNDISTURBED AND DISTURBED TRADE WINDS (A031568); 12 MONTHS \$51,400

### NEW HAMPSHIRE

BRAICHNAN, ROBERT H; TURBULENCE DYNAMICS AND PREDICTA-BILITY (Accepted 001): 12 MONTHS \$18,000

### **NEW YORK**

### NEW YORK UNIVERSITY

DELAND, RAYMOND J; FLUCTUATIONS OF PLANETARY-SCALE WAVES (AGISEN OGI); 4 MONTHS \$13,000 DELAND, RAYMOND J; FLUCTUATIONS OF PLANETARY-SCALE WAVES (AGRESS) OGI); 2 MONTHS \$22,000

#### OKIAHOMA

### UNIVERSITY OF OKLAHOMA

EDDY, AMOS; STATISTICAL ASPECTS OF METEOROLOGICAL DATA ARCHIVING (A016034 001); 24 MONTHS \$108,000

SASAKI, YOSHIKAZU; WEATHER AND ENVIRONMENTAL ANALYSIS TECHNIQUES DEVELOPMENT PROGRAM (ADDOPTO); 24 WONTHS \$104,000

#### OREGON

### OREGON STATE UNIVERSITY

BURT, WAYNE V; MESOSCALE WIND FIELD OVER THE UPWELLING AREA OFF THE OREGON COAST (A018004 001); \$16,100

### VIRGINIA

### UNIVERSITY OF VIRGINIA

GARSTANO, MICHAEL; TURBULENT STRUCTURE OF THE LOW LATITUDE SUBCLOUD LAYER (AGING): 12 MONTHS 8118 000

### WASHINGTON

### UNIVERSITY OF WASHINGTON

REED, RICHARD J, AND WALLACE, JOHN M; GLOBAL METEOROLOGY (AGS\$158); 24 MONTHS \$206,700

#### WISCONSIN

### UNIVERSITY OF WISCONSIN, MADISON

HOUGHTON, DAVID D; THEORY AND TECHNIQUES OF GLOBAL INI-TIALIZATION FOR NUMERICAL PREDICTION MODELS (A012112 002); 24 MONTHS 187.700

YOUNG, JOHN A; THEORETICAL AND NUMERICAL STUDIES ON THE DYNAMICS OF WIND SYSTEMS (A030476); 12 MONTHS \$39,400

MARTIN, DAVID W, AND SIKDAR, DHIRENDRA N; DYNAMIC AND THECHOOPNAMIC FEATURES OF ATS OBSERVED ATLANTIC CLOUD CLUSTERS (AMILIE); IE MONTHS 147,000

# INTERNATIONAL COOPERATIVE SCIENTIFIC ACTIVITIES

### COOPERATIVE SCIENCE PROGRAMS

### ALACKA

### UNIVERSITY OF ALASKA-GEOPHYSICAL INSTITUTE

BENSON, CARL S: METAMORPHISM OF SNOW AND ITS TRANSFORMATION INTO GLACIER ICE IN PACIFIC AND ARCTIC AREAS (F009945); 23 MONTHS \$10,500

### ARKANSAS

### UNIVERSITY OF ARKANSAS

BLYHOLDER, GEORGE; DEVELOPING THEORETICAL MODELS OF ABSORPTION (F635141); 12 MONTHR \$14,500

### CALIFORNIA

SOLOMON, HAROLD; INFLUENCE ON THE DEVELOPMENT OF THE KUROSHIO MEANDER SOUTH OF HONSHU (FOOD448); 12 MONTHS \$7,400 KENNEDY, GEORGE C; INDIA-U.S. EXCHANGE OF SCIENTISTS (FOOD41); 8 MONTHS \$1,430

### ASIA FOUNDATION

PIERSON, HARRY H; SCIENTIFIC AND TECHNICAL PROGRAMS WITH THE REPUBLIC OF CHINA (F03501); 24 MONTHS 475,000

### STANFORD UNIVERSITY

ASHLEY, HOLT; COLLABORATIVE RESEARCH IN THE FIELD OF DYNAMIC AEROELASTICITY (FOSSOS): 12 MONTHS \$23,800

### UNIVERSITY OF CALIFORNIA, BERKELEY

SNYDER, WILLIAM C; TAXONOMY AND NOMENCLATURE OF GIB-BERELLA (FUSARIUM) MONILIFORME (FOODISS 001); 24 MONTHS \$5,000 SATIR, PETER; CELLULAR CONTROL OF CILIARY MOTION (FOSISS); 9 MONTHS \$4,200

### UNIVERSITY OF CALIFORNIA, DAVIS

RYUGO, KAY: FUNGAL ISOLATES OF CERATOCYSTSIS FIMBRIATA (FOISIGE); 7 MONTHS \$12,100



#### COLORADO

IFILER, EDUARDO; OTHER PROGRAM AWARDS (GIAWDS); 10 M.). THS \$21,450

### COLORADO SCHOOL OF MINES

LERGY, L W; ENGINEERING GEOLOGY, SUBSURFACE GEOLOGY, PROTOGEOLOGY AND SELENOLOGY (FOOGLIS), 10 MONTHS \$13,400

### COLORADO STATE UNIVERSITY

SHEN, HSIEH WEN; RIVER MECHANICS (FOJJ203); 12 MONTHS \$15,700

#### CONNECTICUT

### UNIVERSITY OF CONNECTICUT

BOHN, ROBERT K; BOND LENGTHS IN STRAINED COMPOUNDS (F049984); 12 MONTHS \$18,300

### DISTRICT OF COLUMBIA

SINGH, NARINDER M; INDIA-UNITED STATES EXCHANGE OF SCIENTISTS (F030755); 6 MONTHS 12,064

UDUPA, R V K; INDIA-UNITED STATES EXCHANGE OF SCIENTISTS (FOGI885); 2 MONTHS \$1,585

JAYARAMAN, R; INDIA-U.S. EXCHANGE OF SCIENTISTS (F038551); 2 MONTHS \$1,820

NONE; OTHER PROGRAM AWARDS (GRAWDS); \$104,509

### AMERICAN ASSOCIATION FOR ADVANCEMENT SCIENCE

BEVAN, WILLIAM; EXCHANGE OF SCIENTISTS WITH THE ALL-UNION SOCIETY 'ZNANIYE' U.S.S.R. (FOSIERS'S); 36 MONTHS \$16.060

#### AMERICAN CHEMICAL SOCIETY

WALL, FREDERICK 1: AN SMINENT SCIENTIST EXCHANGE PRO-GRAM INVOLVING CHEWISTS FROM THE UNITED STATES AND JAPAN (FOSIS(T): 24 MONTHS \$24,600

### CARNEGIE INSTITUTION OF WASHINGTON

SACKS, I SELWYN, HIGH SENSITIVITY STRAIN MEASUREMENT IN AN EARTHQUAKE REGION, USING BOREHOLE STRAINMETERS (FO00128 001); 12 MONTHS \$2,500

### COURTESY TRAVEL SERVICE

MARILLEY, JAME E; ADMINISTRATIVE SERVICES IN SUPPORT OF INTERNATIONAL SCIENCE ACTIVITIES SPONSORED BY THE NATIONAL SCIENCE FOUNDATION (C374000 011); \$176,000

MARILLEY, JANE E. ADMINISTRATIVE SERVICES IN SUPPORT OF INTERNATIONAL SCIENCE ACTIVITIES SPONSORED BY THE NA-TIONAL SCIENCE FOUNDATION (C37,2000 013); & MONTHS \$104,000

MARILLEY, JANE E; ADMINISTRATIVE SERVICES IN SUPPORT OF INTERNATIONAL SCIENCE ACTIVITIES SPONSORED BY THE NATIONAL SCIENCE FOUNDATION (C374000 014): \$25,000

### DEPARTMENT OF LABOR

PASCHKE, PAUL; PLACEMENT AND SUPPORT OF ROMANIAN TRAINEES IN THE UNITED STATES UNDER THE NSF ADMINISTERED U.S. ROMANIA SCIENCE AND TECHNOLOGY EXCHANGE AND COOPERATION PROGRAM (CA65000); 12 MONTHS \$12,000

### NATIONAL ACADEMY OF SCIENCES

RABINOWITCH, VICTOR; PARTIAL SUPPORT OF A U.S. BRAZILIAN PROGRAM FOR BRAZILIAN DEVELOPMENT OF POSTGRADUATE RESEARCH IN CHEMISTRY (CJ1014; 002); 12 MONTHS \$41,400

RABINOWITCH, VICTOR; PARTIAL SUPPORT OF A U.S.-BRAZILIAN PROGRAM FOR BRAZILIAN DEVELOPMENT OF POST-GRADUATE RESEARCH IN CHEMISTRY (C310184 003); 12 MONTHS \$54,000

TODD, W MURRAY; JOINT SYMPOSIUM ON SCIENCE POLICY WITH BULGARIAN ACADEMY OF SCIENCES (CJ10338); 4 MONTHS \$22,800

KEATLEY, ANN: EXCHANGE OF SCIENTISTS BETWEEN THE UNITED STATES AND THE PEOPLE'S REPUBLIC OF CHINA (C310249); 12 MONTHS \$100.000

### DEPT. OF COMMERCE OFFICE OF SECRETARY DOC

WAKELIN, JAMES H JR; A CTAB STUDY OF TECHNOLOGICAL TRANSFER TO DEVELOPING COUNTRIES (AGOOPTA); 12 MONTHS \$25,000

### NATIONAL ACADEMY OF SCIENCES NATIONAL RESEARCH COUNCIL

MITCHELL, LAWRENCE C: EXCHANGE OF SCIENTISTS BETWEEN THE NATIONAL ACADEMY OF SCIENCES, U.S.A., AND THE ACADEMIES OF THE UNION OF SOVIE! SOCIALIST REPUBLICS, POLAND, YUGOSLAVIA, ROMANIA, HUNGARY, CZECHOSLOVAKIA, AND BULGARIA (CI1003) 018; 13 MONTHS \$913,384

### FLORIDA

# UNIVERSITY OF MIAMI-SCHOOL OF MARINE AND ATMOSPHERIC SCIENCES

ESTOQUE, MARIANO; MESOMETEOROLOGICAL EFFECTS OF LAKE ONTARIO (FOURIOS); 24 MONTHS \$2,400

### GEORGIA

### UNIVERSITY OF GEORGIA

JANZEN, EDWARD G: SPIN TRAPPING OF DIRADICALS (FOSIERE); 6 MONTHS 29 400

HERZ, NORMAN; RADIOCARBON AGE DATING OF THE BLACK SEA PLATFORM AND THE DANUBE DELTA OF ROMANIA (FOISOOR); EA MONTHS 45,500

#### **HAWAII**

### UNIVERSITY OF HAWALL

ADEY, WALTER H, AND WOOLLARD, GEORGE P; A QUANTITATIVE ECOLOGICAL COMPARISON OF THE COAST OF HOKKAIDO AND THE NORTH ATLANTIC BASED ON CRUSTOSE CORALLINES (FOSIII?); 12 MONTHS \$3,000

HSIAO, SIDNEY C; DEVELOPMENTAL BIOLOGY (FOSISIS); 10 MONTHS \$18,526

ABRAMSON, NORMAN; PACIFIC EDUCATIONAL COMPUTER NET-WORK STUDY ( 03/220\*); 24 MONTHS \$5,500

#### ILLINOIS

### UNIVERSITY OF ILLINOIS AT THE MEDICAL CENTER

OMACHI, AKIRA; STUDIES IN PYRIDINE NUCLEOTIDE BIOCHEMISTRY (F032808); 6 MONTHS \$2,200

### UNIVERSITY OF ILLINOIS AT URBANA

WERT, CHARLES A, AND ALTSTETTER, CARL J; THE INTERACTION OF PLASTIC DEFORMATION AND IRRADIATION WITH PRECIPITATES IN BCC ALLOYS (F08983); 24 MONTHS \$1,400

#### INDIA

DORAISWAMY, L R; INDIA-UNITED STATES EXCHANGE OF SCIENTISTS (FOI1486); 2 MONTHS \$2,004

PAKRASHI, SATYESH C; INDIA: UNITED STATES EXCHANGE OF SCIENTISTS (F038549); 3 MONTHS \$3,130

### CENTRAL GLASS & CERAMICS RESEARCH INSTITUTE

MUKERJI, J; INDIA-UNITED STATES EXCHANGE OF SCIENTISTS (FOJERO) X00); 6 MONTHS \$2,820

### AWO

### UNIVERSITY OF IOWA

GORDON, GILBERT; EFFECT OF ANIONS AND PHOTO-CHEMICALLY PRODUCED INTERMEDIATES ON THE URANIUM EXCHANGE REACTIONS (FGJIS19); 24 MONTHS 42,600

### KANSAS

### Kansas State University

FAN, LIANG-TSENG; SYSTEMS ENGINEERING APPROACH TO THE ENVIRONMENTAL POLLUTION CONTROL (F636589); 24 MONTHS \$5,600

### LOUISIANA

COWIN, S C; INDIA-US. EXCHANGE OF SCIENTISTS (F632550); 1 MONTHS \$1,840

### MARYLAND

KLAYMAN, DANIEL L; INDIA-UNITED STATES EXCHANGE OF SCIENTISTS (FOJI260); 2 MONTHS \$1,390

NONE; OTHER PROGRAM AWARDS (03AWDS); \$15,062

### AMERICAN TYPE CULTURE COLLECTION

HWANG, SHUH-WEI; FEEDING HABITS OF THE GREY MULLET FRY AND ALGAE CULTURE FOR FEEDING EXPERIMENTS (FOSISSI); 1 MONTHS \$2,400

## JOHNS HOPKINS UNIVERSITY-SCHOOL OF HYGIENE & PUBLIC HEALTH

CONSTOCK, GEORGE W; COMPARATIVE STUDY OF RISK FACTORS (ENVIRONMENTAL AND BIOLOGIC) AFFECTING CARDIGVASCULAR AND RESPIRATORY DISORDERS (FG/8220); 24 MONTHS \$9,200

### MASSACHUSETTS

### HARVARD UNIVERSITY

RAMSEY, NORMAN F; A NEUTRON ELECTRIC DIPOLE MOMENT EX-PERIMENT AT GRENOBLE (FOJI169\*); 48 MONTHS \$11,100

KUNO, SUSUMU; COMPUTER INPUT-OUTPUT OF CHINESE CHARACTERS (FO3/109); 24 MONTHS \$7,200

### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

DRESSELHAUS, MILDRED S; ELECTRONIC PROPERTIES OF GRA-PHITE (Fasista), 24 MONTHS \$5,500

### MICHIGAN

MICHIGAN STATE UNIVERSITY

WANG, CHANG-YI; PERTURBATION METHODS OF APPLIED MATHE-MATICS (Foodili): 9 MONTHS \$17,900

#### WAYNE STATE UNIVERSITY

KIRSCHNER, STANLEY; CONFERENCE ON IMPROVING INTERNA-TIONAL COOPERATION IN SCIENCE (FOULT II): 6 MONTHS \$5,500

KIRSCHNER, STANLEY; BIOINORGANIC CHEMISTRY- COMPOUNDS OF ANTIVIRAL AND ANTICANCER EFFECT, COMPLEXES OF SMALL MOLECULES (F035003), 36 MONTHS 181500

#### **NEW HAMPSHIRE**

#### DARTMOUTH COLLEGE

HUGGINS, ELISHA R: LOW TEMPERATURE PHYSICS- QUANTUM FLUIDS (FOSISSO); 10 MONTHS \$14,400

#### **NEW YORK**

HORECKER, BERNARD L; INDIAUS, EXCHANGE OF SCIENTISTS (FOSO190); 6 MONTHS \$1,002

#### BROOKHAVEN LABORATORY

HOUGH, P V C; DEVELOPMENT AND FABRICATION OF AN AUTO-MATIC MEASURING DEVICE (FLYING IMAGE DIGITIZER) FOR BUBBLE CHAMBER PHOTOGRAPHS (AG00212); 24 MONTHS \$5,500

#### COLUMBIA UNIVERSITY

EBREY, THOMAS G: BIOPHYSICAL STUDIES OF VISUAL PIGMENTS (FGS1458); 9 MONTHS \$8,000

#### NEW YORK MEDICAL COLLEGE

ASANUMA, HIROSHI; MOTOR CONTROL (Fosieso); 24 MONTHS \$5,800 ASANUMA, HIROSHI; MOTOR CONTROL (Fosieso 601); \$1,100

### RENSSELAER POLYTECHNIC INSTITUTE

GERHARDT, LESTER A; ADAPTIVE PROCESSING, FILTERING, AND DESIGN OF DIGITAL SIGNALS (FGJ1348); 24 MONTHS \$4,400

WANG, LEON R L; CONTEMPORARY STRUCTURAL RESEARCH, ANALYSIS AND DESIGN (FOSSISP); 11 MONTHS \$15,500

LING, FREDERICK F: FLUID MECHANICS AND TURBULENCE WITH APPLICATIONS IN TRIBOLOGY (FOISOOS); 24 MONTHS \$63,400

### COLUMBIA UNIVERSITY-COLLEGE OF PHYSICIANS AND SURGEONS

WANG, HSUEH-HWA; CARDIOVASCULAR PHARMACOLOGYICNS CONTROL OF REGIONAL BLOOD FLOW IN MONKEYS (FOSOTER); 6 MONTHS \$2200

### OKLAHOMA

### OKLAHOMA STATE UNIVERSITY

HADY, M ABDEL, AND MUSTAFA, HASAN; APPLICATIONS OF MODERN AIRBORNE REMOTE SENSING AND AERIAL RECONNAISSANCE TECHNIQUES TO AGRICULTURE AND REGIONAL DEVELOPMENT (FOJIAGOOIT): 12 MONTHS \$2,800

### PENNSYLVANIA

MALENBAUM, WILFRED; INDIA-UNITED STATES EXCHANGE OF SCIENTISTS (FOSOES); 8 MONTHS \$1,370

FILACHIONE, EDWARD M; INDIA-UNITED STATES EXCHANGE OF SCIENTISTS (F033240); 3 MONTHS \$1,400

### UNIVERSITY OF PITTSBURGH

FULLER, MICHAEL, AND SCHMIDT, VICTOR A; INVESTIGATIONS OF THE FIELD REVERSALS USING TERTIARY INTRUSIVE ROCKS EX-POSED IN THE CIRCUM-PACIFIC REGIONS (FOSE218): 24 MONTHS \$5,500

LYNCH. RICHARD V III; BIOCHEMICAL STUDIES OF LIGHT-EMITTING COMPONENTS OF JAPANESE FISH AND CRUSTACEA (FOSISOT), 12 MONTHS 112200

PRATT, RICHARD H, AND GAVRILA, MIHAI: COOPERATIVE STUDIES OF PHOTON ABSORPTION IN MATTER (FOLIPS): 36 MONTHS \$71,900

### UNIVERSITY OF PENNSYLVANIA-SCHOOL OF MEDICINE

YONETANI, TAKASHI, AND BRITTON, CHANCE; MAGNETIC, OPTICAL, AND KINETIC PROPERTIES OF HEMOPROTEINS (FOJISEO); 24 MONTHS \$5,200

### TENNESSEE

DUCKETT, KERMIT E; INDIA-US. EXCHANGE OF SCIENTISTS (FOGISTS); & MONTHS \$1,140

PURCELL, WILLIAM P; INDIA-US. EXCHANGE OF SCIENTISTS (FAISHIS); 12 MONTHS \$1,610

### TEXAS

### UNIV OF TEXAS AT DALLAS

COLLINS, CARL B; A U.S. - ROMANIAN JOINT RESEARCH PROJECT ON ATOMIC AND PLASMA PHYSICS (FO0014) 001); 24 MONTHS \$113,150

### VIRGINIA

DICKEY, JOHN W; INDIA U.S. EXCHANGE OF SCIENTISTS (FOSOSES); 1 MONTHS \$1,420

NONE: OTHER PROGRAM AWARDS (01AWDS); \$38,411

### VIRGINIA POLYTECHNIC INSTITUTE

GOTOW, KAZUO; NUCLEON MOMENTUM DISTRIBUTION AND NUCLEON RESONANCE IN ELECTRON NUCLEAR SCATTERING (FOITEM); 10 MONTHS \$15200

#### WASHINGTON

### UNIVERSITY OF WASHINGTON

FARNER, DONALD S; ENVIRONMENT AND NEUROENDOCRINE FUNCTION (F03333): 24 MONTHS \$6,000

#### WISCONSIN

### UNIVERSITY OF WISCONSIN, MADISON

MYERS, PHILLIP 8, BORMAN, GARY L, NEWHALL, HENRY K, AND UYEHARA, OTTO A; UNDERSTANDING AND CONTROLLING EXHAUST POLLUTANTS FROM INTERNAL COMBUSTION ENGINES (FOSSOON XOO); 12 MONTHS \$60,200

### U.S. PARTICIPATION IN PLANNING AND DEVELOPING INT'L SCIENCE PROJECTS

### DISTRICT OF COLUMBIA

#### NATIONAL ACADEMY OF SCIENCES

ROWAN, EDMUND C; INTERNATIONAL ORGANIZATIONS AND PRO-GRAMS PROJECT (C310040 011); 12 MONTHS \$344,000

KELLERMANN, HENRY J; PARTIAL SUPPORT OF THE COMMITTEE FOR INTERNATIONAL ENVIRONMENTAL PROGRAMS (CS10195 003\*); 9 MONTHS \$30,000

DUNHAM, CHARLES L; U.S. NATIONAL COMMITTEE FOR THE INTERNATIONAL BRAIN RESEARCH ORGANIZATION (IBRO) (C\$10814\*); 12 MONTHS \$1,400

### NATIONAL ACADEMY OF SCIENCES NATIONAL RESEARCH COUNCIL

MITCHELL, LAWRENCE C; SUPPORT OF SPECIAL COMMITTEE FOR THE CELEBRATION OF THE COPERNICUS QUINQUECENTENNIAL (CJ10220), 28 MONTHS \$3,000

DYER, EDWARD R, AND WOOD, GEORGE W; TASK ORDER FOR SUP-PORT OF THE U.S. NATIONAL COMMITTEES FOR THE INTERNATIONAL ASTRONOMICAL UNION AND THE INTERNATIONAL UNION OF THEORETICAL AND APPLIED MECHANICS (CSIO1817), 12 MONTHS \$18,400 ODISHAW. HUGH: FOURTEENTH GENERAL ASSEMBLY OF THE IN-TERNATIONAL UNION OF PURE AND APPLIED PHYSICS (CSI0186); 16 MONTHS \$19,000

BERG, JOSEPH W JR; U.S. EXHIBIT FOR THE INTERNATIONAL GEO-GRAPHICAL CONGRESS (C#10#16); 12 MONTHS \$4,687

DILLON, ROBERT M; SUPPORT OF UNITED STATES PARTICIPATION IN THE SECOND INTERNATIONAL CONFERENCE ON PERMAFROST, YAKUTSK, USSR, JULY 1973 (C\$10947); 18 MONTHS \$77,600

### MARYLAND

### UNIVERSITY OF MARYLAND, COLLEGE PARK

GARDNER, MARJORIE; INTERNATIONAL CONFERENCE ON THE EDUCATION OF TEACHERS FOR INTEGRATED SCIENCE (FOSIELY); 24 MONTHS \$5,000

### MASSACHUSETTS

### AMERICAN ACADEMY OF ARTS AND SCIENCES

VOSS, JOHN; SUPPORT OF U.S. JOINT COMMITTEE FOR THE INTER-NATIONAL CENTRE OF INSECT PHYSIOLOGY AND ECOLOGY IN NAIROBI, KENYA (ICIPE) (F000407 009); 12 MONTHS \$24,200

### MINNESOTA

### INTERNATIONAL STUDIES ASSOCIATION

SLOUKA, ZDENEK, AND TURNER, JOHN; PARTIAL SUPPORT OF PAR-TICIPANTS IN THE ROUNDTABLE ON STUDIES IN WORLD SCIENCE AND TECHNOLOGY AFFAIRS, MARCH 17, 1974, DALLAS, TEXAS (FOJS272); 6 MONTHS \$1.400

### TENNESSEE

### UNIVERSITY OF TENNESSEE, KNOXVILLE

OLSON, JERRY S; INTERNATIONAL WORKSHOPS ON ANALYSIS OF WORLD ECOSYSTEMS (F64467); 12 MONTHS \$18,000

### WISCONSIN

### UNIVERSITY OF WISCONSIN, MADISON

HASLER, ARTHUR D; SUPPORT FOR INTERNATIONAL ASSOCIATION FOR ECOLOGY (FOLIZES X01\*); 12 MONTHS \$30,000



### INTERNATIONAL TRAVEL PROGRAM

LAMORBAUX, PHILIP E; TO ATTEND- MESTING OF THE LAH. COM-MITTEE ON HYDROGEOLOGY OF KARST, BEING HELD IN MONTPELLI. ER, FRANCE, SEPTEMBER 27 - OCTOBER 2, 1971 (AGS1012); 6 MONTHS

LEAR, W EDWARD, TRAVEL TO- DEVELOP COOPERATIVE PROJECT WITH SCIENTISTS AT THE UNIVERSITY OF TEHRAN (FORISSI): 6 MONTHS 8962

ABRAMSON, H N; TRAYEL TO ATTEND- SYMPOSIUM ON FLOW-IN-DUCED STRUCTURAL VIBRATIONS, KARLSRUHE, GERMANY, AUGUST 14-18. 1272 (KOSSOOO): 6 MONTHS \$200

Colburn, Charles B; trayel to attend- annual meeting of THE CHEMICAL SOCIETY, MANCHESTER, ENGLAND, APRIL 10-14, 1978 (POJESOR): 6 MONTHS 8482

#### ARIZONA

MORRIS, THOMAS M; TRAVEL TO ATTEND- JOINT MEETING OF THE MINING AND METALLURGICAL INSTITUTE OF JAPAN AND THE AMERICAN INSTITUTE OF MINING AND METALLURGICAL EN-GINEERS, TOKYO, JAPAN, MAY 11-23, 1972 (HOSSISS); 6 MONTHS \$860

HUBLEMAN, LAWRENCE P; TO ATTEND THE SUMMER SCHOOL ON CIRCUIT THEORY 1971, TALE, LOW TATRA MOUNTA CRECHOSLOVAKIA, SEPTEMBER 18-18, 1971 (KOSO440); 6 MONTHS \$250 MOUNTAINS,

MATTSON, ROY H; TRAVEL TO ATTEND- POPOY SOCIETY MEETING, MOSCOW, USSR, MAY 1872 (Kosesse): 6 MONTHS \$700

HALL, H & JR; TRAVEL - TO VISIT PROMINENT EUROPEAN POLYMER RESEARCH INSTITUTES, IN ENGLAND, BELGIUM AND FRANCE, APRIL 10-84, 1972 (POSELLS); 6 MONTHS 862

FELTEN, JAMES E; TRAVEL SUPPORT TO ATTEND- SYMPOSIUM ON X. AND GAMMA-RAY ASTRONOMY (NON-SOLAR), MADRID, SPAIN. MAY

11-15, 1272 (POS 1488); 8 MONTHS \$736

FIPE, PAUL C: TO ATTEND. CZECHOSLOVAK CONFERENCE ON DIF. FERENTIAL EQUATIONS AND THEIR APPLICATIONS, BRND. CEECHOSLOVAKIA, AUGUST 12-SEPTEMBER 2, 1972 (POS 1958); 6 MONTHS 1942

O'DONOVAN, PATRICK J; TO ATTEND- NATO ADVANCED STUDY IN-STITUTE ON DUALITY IN ELEMENTARY PARTICLES, LOUVAIN, BELGI-UM, AUGUST to - SEPTEMBER 16, 1971 (2002145); 6 MONTHS 8664

SYLVESTER, GARRETT S; TO ATTEND. NATO ADVANCED STUDY IN. STITUTE ON MATHEMATICS OF CONTEMPORARY PHYSICS, LONDON, ENGLAND, AUGUST 13 · SEPTEMBER 11, 1971 (Z002149); 6 MONTHS \$193

### CALIBORNIA

HELSON, CARLTON HANS; TO ATTEND. A CONFERENCE ON PORT AND OCEAN ENGINEERING UNDER ARCTIC CONDITIONS, TROND-HEIM, NORWAY, AUGUST 81-20, 1971 AND THE EIGHTH INTERNA-TIONAL SEDIMENTOLOGICAL CONGRESS, HEIDELBERG, GERMANY, AUGUST 30 - SEPTEMBER 4, 1971 (A030129); 6 MONTHS \$648

INGLE, JAMES C JR; TO ATTEND- THE EIGHTH INTERNATIONAL SEDIMENTOLOGICAL CONGRESS, HEIDELBERG, WEST GERMANY, AU-

GUST 30 - SEPTEMBER 4, 1971 (A030331); 6 MONTHS \$622

BANDY, ORVILLE L; TO ATTEND-THE TWELFTH MICROPALEON-TOLOGICAL COLLOQUIUM, URRANIAN SSR AND MOLDAVIAN SSR, USSR, SEPTEMBER 18-18, 1971 (A040517), 6 MONTHS \$1,066

TYLER, JOHN E; TO ATTEND- THE SYMPOSIUM ON AQUATIC PHOTOBIOLOGY, LONDON, ENGLAND, JANUARY 18-20, 1978 (A001806); 6 MONTHS MITS

SMITH, RAYMOND C: TRAVEL TO ATTEND- SYMPOSIUM ON OPTICS

OF THE SEA, COPENHAGEN, DENMARK JUNE 19-23, 1972 (A033004); 6 MONTHS \$182

EWART, TERRY E; TRAVEL TO ATTEND- SYMPOSIUM OF THE INTER-NATIONAL COUNCIL FOR THE EXPLORATION OF THE SEA (ICES), AARHUS, DENMARK, JULY 4-7, 1978 (A033004): 6 MONTHS \$718

AUSTIN, ROSWELL W, TRAVEL TO ATTEND- SYMPOSIUM ON OPTI-CAL ASPECTS OF OCEANOGRAPHY, COPENHAGEN, DENMARK, JUNE 19-23. 1978 (A033231); 6 MONTHS \$487

THORNE, RICHARD M; TRAVEL TO ATTEND- COSPAR (SYMPOSIUM ON CRITICAL PROBLEMS OF MAGNETOSPHERIC PHYSICS). MADRID, SPAIN, MAY 10-84, 1978 (A033481); 6 MONTHS \$758

MOZER, FORREST S; TRAVEL TO ATTEND. COSPAR, FIFTEENTH PLE-NARY MEETING, MADRID, SPAIN, MAY 10-84, 1978 (A033483); 6 MONTHS

BANDY, ORVILLE L; TRAVEL TO ATTEND- INTERNATIONAL COL-LOQUIUM ON THE BOUNDARY BETWEEN NEOGENE AND QUATERNA-RY, KISHINEV AND TBILISI, USSR. MAY REJUNE 4, 1972 (ACSIDES); 6 MONTHS 1885

NEIBURGER, MORRIS; TO ATTEND. THE INTERNATIONAL CLOUD PHYSICS CONFERENCE, LONDON, ENGLAND, AUGUST 21-26, 1972

(Addison); 6 Months \$595

COOPER, CHARLES F; TO ATTEND- UNESCO INTERGOVERNMENTAL COORDINATING COUNCIL, PARIS, FRANCE, NOVEMBER 8-19, 1971 (BOSISSS): 6 MONTHS \$1.110

WOODWARD, DOW O; TO ATTEND- GOLDEN JUBILEE OF THE INDIAN INSTITUTE OF SCIENCE, BANGALORE, INDIA, DECEMBER 8-8, 1971 (B0\$1600); 6 MONTHS \$1,350

AXELROD, DANIEL I; TO ATTEND- SILVER JUBILEE OF THE BIRBAL SAHNI INSTITUTE OF PALEOBOTANY, LUCKNOW, INDIA, DECEMBER &-11, 1871 (BOS1664); 6 MONTHS \$1,260

GREEN, MELVIN M; SECOND CONFERENCE OF THE USSR. SOCIETY OF GENETICS AND SELECTION, MOSCOW, USSR, JANUARY 11-FEBRUA-RY 5, 1878 (BOSE026); 6 MONTHS \$703

SYPHERD, PAUL S; TRAVEL TO ATTEND EUROPEAN MOLECULAR BIOLOGY ORGANIZATION WORKSHOP ON RIBOSOMES, FRANCE, APRIL 1978 (BOSSELS): 6 MONTHS \$748

COHN, MELVIN; TRAVEL TO ATTEND- BIOCHEMISTRY OF GENE EX-PRESSION IN HIGHER ORGANISMS, AUSTRALIA, MAY 1978 (BOSSESS); 6 MONTHS \$637

CAMPBELL, J A; TRAYEL TO ATTEND- THIRD NATIONAL CONGRESS OF YUGOSLAV CHEMISTS, LJUBLJANA, YUGOSLAVIA, JUNE 18-17, 1878 (FOJ4604); 6 MONTHS \$516

POLLAK, MICHAEL; TO ATTEND- MEETING ON AMORPHOUS AND LIQUID SEMICONDUCTORS, LONDON, ENGLAND, DECEMBER 17-18, 1971 (HO\$1888 001); \$182

HARRISON, WALTER A; TRAVEL SUPPORT TO ATTEND- THE SPRING SCHOOL 1918 ON THE ELECTRONIC STRUCTURE OF ALLOYS AND TRANSITION METALS, GAUSSIG, GERMAN DEMOCRATIC REPUBLIC, APRIL 1878 (HOSSEIS); 6 MONTHS \$879

GOODKIND, JOHN M; TRAVEL SUPPORT TO ATTEND. THE EU-ROPHYSICS STUDY CONFERENCE, ALBE', FRANCE, APRIL 11-14, 1978

(Hosessi); 6 MONTHS \$820

HUMPHREY, FLOYD B: TRAVEL TO ATTEND-INTERNATIONAL CON. FERENCE ON MAGNETICS, KYOTO AND THE INTERNATIONAL (FIFTH) COLLOQUIM ON MAGNETIC THIN FILMS, MT. FUJI AREA, JAPAN, APRIL 10-19, 1974 (HOSSOSS); 6 MONTHS 1740

PORTIS, ALAN M; TRAVEL TO ATTEND-MEETING ON PERSPECTIVES FOR HYPERFINE INTERACTIONS IN MAGNETICALLY ORDERED SYSTEMS, L'AQUILA, ITALY, SEPTEMBER 11-15, 1978 (HOJ4760); 6 MONTHS

JACCARINO, VINCENT; TRAVEL TO ATTEND CONGRESS AMPERE, TURKU, FINLAND AND HF. INTERACT. IN MAG. MAKR., L'AQUILLA, ITALY, AUGUST 81 - SEPTEMBER 14, 1978 (HOS 1800); 6 MONTHS \$600

NICOL, MALCOLM F: TRAVEL TO ATTEND- THIRD INTERNATIONAL CONFERENCE ON RAMAN SPECTROSCOPY, REIMS, FRANCE, SEP-TEMBER 8-13, 1972 (HOS4801); 6 MONTHS \$914

WALKER, DONALD E; TO ATTEND- THE SECOND INTERNATIONAL JOINT CONFERENCE ON ARTIFICIAL INTELLIGENCE, LONDON, EN-GLAND, SEPTEMBER 1-3, 1971 (JOSOSES); 6 MONTHS \$360

MUNSON, JOHN H; TRAVEL TO ATTEND SECOND INTERNATIONAL JOINT CONFERENCE ON ARTIFICIAL INTELLIGENCE, LONDON, EN. GLAND, SEPTEMBER 1-3, 1971 (JOSCHEI); 6 MONTHS \$350

DILLIGAN, ROBERT J, TRAVEL SUPPORT TO ATTEND- THE SYMPOSI. UM ON THE USE OF THE COMPUTER IN LITERARY RESEARCH, EDIN-BURGH, SCOTLAND, MARCH 27-50, 1978 (JOSSOS); & MONTHS \$288

WEINGARTEN, FRED W; TRAVEL TO ATTEND- INTERNATIONAL ON-LINE 78 MEETING, UXBRIDGE UNIVERSITY, ENGLAND, SEPTEMBER 4-7, 1972 (JOSSSS); 6 MONTHS \$550

FERRARI, DOMENICO, TRAVEL TO ATTEND- INTERNATIONAL COM-PUTING SYMPOSIUM, VENICE, ITALY, APRIL 18 - 11, 1978 (JOSSSSS); 6 MONTHS \$491

NIELSEN, NORMAN R; TRAVEL TO ATTEND- FIFTH AUSTRALIAN COMPUTER CONFERENCE, BRISBANE, AUSTRALIA, MAY 18-14, 1918 (JOS (456); 6 MONTHS \$800

NOORANY, 1; TO ATTEND - INTERNATIONAL CONFERENCE ON OCEAN ENGINEERING UNDER ARCTIC CONDITIONS TRONDHEIM. NORWAY - AUGUST 21 - 30, 1971 (KOJ0099); 6 MONTHS \$400

EVERHART, THOMAS E: TO ATTEND- SIXTH INTERNATIONAL CON-FERENCE ON X-RAY OPTICS AND MICROANALYSIS - OSAKA, JAPAN -SEPTEMBER 5-10, 1971 (K030170); 6 MONTHS \$500

CHELAPATI, C V: TO ATTEND- THE FIRST INTERNATIONAL CON-FERENCE ON STRUCTURAL MECHANICS IN REACTOR TECHNOLOGY, BERLIN, GERMANY, SEPTEMBER 20-21, 1971 (K030258); 6 MONTHS \$350

GOREN, SIMON L; TO ATTEND- THE INTERNATIONAL SYMPOSIUM ON TWO-PHASE SYSTEMS, HAIFA, ISRAEL, AUGUST 20 TO SEPTEMBER 2, 1971 (KOJOJ92); 6 MONTHS \$500

MAXWORTHY, TONY; TO ATTEND- THE THIRD INTERNATIONAL COL-LOQUIUM ON GASDYNAMICS OF EXPLOSIONS AND REACTIVE SYSTEMS, MARSEILLE, FRANCE, SEPTEMBER 14-17, 1971 (KOSOLSO); 6 MONTHS \$500

OPPENHEIM, A K; TO ATTEND- THE THIRD INTERNATIONAL COL-LOQUIUM ON GASDYNAMICS OF EXPLOSIONS AND REACTIVE SYSTEMS, MARSEILLE, FRANCE, SEPTEMBER 18-17, 1971 (KOSOLSI); 6 MONTHS \$560

MIKA, THOMAS S; TO ATTEND- THE THIRD EUROPEAN SYMPOSIUM ON SIZE REDUCTION, CANNES, FRANCE, OCTOBER 5-8, 1971 (KON0449); 6 MONTHS \$450

LESKOVAR, BRANKO; TO ATTEND- THE 1971 IEEE INTERNATIONAL SYMPOSIUM ON ELECTRICAL NETWORK THEORY, LONDON, ENGLAND, SEPTEMBER 6-10, 1971 (KO30147); 6 MONTHS \$230



KUH, ERNEST 8; TO ATTEND. THE 1871 IEEE INTERNATIONAL SYM; POSIUM ON ELECTRICAL NETWORK THEORY, LONDON, ENGLAND, SEPTEMBER 6-10, 1971 (KOJOLIS); 6 MONTHS \$250

MITRA, S K; TO ATTEND- THE 1971 IEEE INTERNATIONAL SYMPOSI-UM ON ELECTRICAL NETWORK THEORY, LONDON, ENGLAND, SEP-TEMBER 6-10, 1971 (KO30148); 6 MONTHS \$250

JOHNSTON, JAMES P. TO ATTEND- THE SPECIALISTS' MEETING ON 'TURBULENT SHEAR FLOWS,' LONDON, ENGLAND, SEPTEMBER 15-15, 1971 (KOJO163); 6 MONTHS \$480

WILKE, CHARLES R; TRAVEL TO ATTEND. THE FOURTH INTERNA-TIONAL FERMENTATION SYMPOSIUM, KYOTO, JAPAN, MARCH 19-25, 1978 (Kose (44); 6 MONTHS \$660

SKLANSKY, JACK; TRAVEL TO- RESEARCH ON TRAINABLE PATTERN RECOGNITION, HAIFA, ISRAEL, AUGUST 1, 1918-JULY 15, 1914 (KOS4152); 12 MONTHS \$340

WILSON, KENT R; TO ATTEND. TENTH INTERNATIONAL SYMPOSIUM ON FREE RADICALS, LYON, FRANCE, AUGUST \$1 - SEPTEMBER 3, 1971 SIXTH INTERNATIONAL CONFERENCE ON PHOTOCHEMISTRY, BOR-DEAUX, FRANCE, SEPTEMBER 4-9, 1971 (POJ0164); 6 MONTHS \$922

LEE, EDWARD K C; TO ATTEND- SIXTH INTERNATIONAL CON-FERENCE ON PHOTOCHEMISTRY, BORDEAUX, FRANCE, SEPTEMBER 4-8, 1971 (POJ0176); 6 MONTHS \$890

WHEELER, JOHN C; TO ATTEND- CONFERENCE ON CRITICAL PHENOMENA, LINDAU, WEST GERMANY, SEPTEMBER 21-24, 1971 (P0J0177); 6 MONTHS \$632

CLARK, W GILBERT; TO ATTEND- FOURTH INTERNATIONAL SYM-POSIUM ON MAGNETIC RESONANCE, REHOVOT AND JERUSALEM, ISRAEL, AUGUST 23-31, 1971 (POJO248); 6 MONTHS \$911

EKLOF, PAUL C: TO ATTENDE CAMBRIDGE SUMMER SCHOOL IN MATHEMATICAL LOGIC, CAMBRIDGE, ENGLAND, AUGUST 1-81, 1971 (Pososse); 6 MONTHS \$265

WALECKA, JOHN D. TO ATTEND. THE FOURTH INTERNATIONAL CONFERENCE ON HIGH ENERGY PHYSICS AND NUCLEAR STRUC-TURE, DUBNA, U.S.S.R., SEPTEMBER 7-11, 1871 (POJ0454); 6 MONTHS \$1,129 CONTI. PETER S: TO ATTEND. THE INTERNATIONAL SYMPOSIUM ON

WOLF-RAYET AND HOT STARS, LA PLATA, ARGENTINA, AUGUST 12-21, 1971 (P030472); 6 MONTHS \$400

BARLOW, RICHARD E; TO ATTEND. THE FOURTH CONFERENCE ON PROBABILITY THEORY, BRASOV, ROMANIA, SEPTEMBER 12-18, 1971 AND THE SIXTH PRAGUE CONFERENCE ON INFORMATION THEORY, STATISTICAL DECISION FUNCTIONS AND RANDOM PROCESSES, PRAGUE, CZECHOSLOVAKIA, SEPTEMBER 18-21, 1971 (POJ0387); 6 MONTHS \$732

PARKS, JOEL H: TO ATTEND- THE SYMPOSIUM ON FUNDAMENTAL AND APPLIED LASER PHYSICS, ESFAHAN, IRAN, AUGUST 49 -SEP-TEMBER 5, 1971 (POJOSJ9); 5 MONTHS \$900

CAHILL, THOMAS A; TO ATTEND- MEETING ON CHEMICAL ANALYSIS BY CHARGED PARTICLE BOMBARDMENT, BRUSSELS, BELGIUM, SEP-TEMBER 6-3, 1971 (POJ1050); 3 MONTHS \$784

GUIRAGOSSIAN, ZAVEN G T; TO REPORT ON NEW PARTICLE DETEC-TOR SYSTEM AT 1971 MEETING, YEREVAN, ARMENIA, USSR, NOVERMBER #1-DECEMBER 4, 1971 (POJ1719); 6 MONTHS \$812

ANTOSIEWICZ, HENRY A: TO DO RESEARCH AND LECTURE IN EU-ROPE AND ATTEND SYMPOSIA IN ENGLAND, FRANCE, AND MEXICO, FEBRUARY 1, 1972 THROUGH SEPTEMBER 1, 1972 (POS2361); 12 MONTHS 1893

RIEFFEL, MARC A: TO ATTEND- INFORMAL GATHERING OF MATHE-MATICIANS AND PHYSICISTS OF THE CENTRE UNIVERSITAIRE ET EXPERIMENTAL DE MARSEILLELUMINARY AND GROUPE DE PHYSIQUE THEORIQUE DU C.N.R.S. MARSEILLE, FRANCE, JUNE-JULY 1972 (P033318); 6 MONTHS \$949

ADAMSON, ARTHUR W; TRAVEL TO- INTERNATIONAL CONFERENCE CHEMISTRY AT INTERFACES, ROVINJ, YUGOSLAVIA, JUNE 27-JULY 8.

1972 (POJ1623): 6 MONTHS \$995

DAUBEN, WILLIAM G; TRAVEL TO- FOURTH INTERNATIONAL SYM-POSIUM ON PHOTOCHEMISTRY, BADEN-BADEN, GERMANY, JULY 16-82. 1972 (P031707): 6 MONTHS \$822

HARRIS, ROBERT A; TRAVEL TO- CONDUCT RESEARCH AT CAM-BRIDGE UNIVERSITY, CAMBRIDGE, ENGLAND, AUGUST 10-DECEMBER 20, 1972 (POS4790); 12 MONTHS \$791

STREITWIESER, ANDREW JR; TRAVEL TO- FIRST INTERNATIONAL IUPAC MEETING ON PHYSICAL ORGANIC CHEMISTRY, CRANS SUR SIERRE, SWITZERLAND, SEPTEMBER 1-8, 1974 (POJ 1820); 6 MONTHS \$864

BRAUMAN, JOHN 1; TRAVEL TO- IUPAC CONFERENCE ON PHYSICAL ORGANIC CHEMISTRY, CRANS SUR SIERRE, SWITZERLAND, SEP-TEMBER 3-8, 1978 (POSISEI); 6 MONTHS \$870

PITTS, JAMES N JR; TRAVEL TO- FIRST IUPAC CONFERENCE ON PHYSICAL ORGANIC CHEMISTRY, CRANS SUR SIERRE, SWITZERLAND, SEPTEMBER 1-8, 1978 (POS1886); 6 MONTHS \$899

LINGENFELTER, RICHARD E; TRAVEL TO SEMINAR ON THE PROBLEM OF THE GENERALITY OF PARTICLE ACCELERATION OF VARIOUS SCALES IN COSMOS, AUGUST 16-16, 1972 (POJ4830); 6 MONTHS \$1.114

TAYLOR, HOWARD S; TRAVEL TO INTERNATIONAL CONFERENCE ON MOLECULAR SPECTROSCOPY, WROCAW, POLAND, SEPTEMBER 15-19, 1972 (P031816): 6 MONTHS \$880

JAMES, ROBERT C: TO ATTEND. INTERNATIONAL SYMPOSIUM ON PARTIAL DIFFERENTIAL EQUATIONS AND THE GEOMETRY OF NORMED SPACES, JERUSALEM, ISRAEL, JUNE 19-88, 1978 (POS4855); 6 MONTHS \$507

FRICKE, MARTIN P. TRAVEL TO ATTEND. INTERNATIONAL CON-FERENCE ON THE STUDY OF NUCLEAR STRUCTURE WITH EUTRONS, KESZTHELY, HUNGARY, JULY 81-AUGUST 8, 1978 (POJ 1941); 6

ROSENTHAL, HASKELL P; TO ATTEND. INTERNATIONAL SYMPOSI-UM ON PARTIAL DIFFERENTIAL EQUATIONS AND NORMED LINEAS SPACES, JERUSALEM, ISRAEL, JUNE 19-86, 1972 (POJ1960): 6 MONTHS \$604

BANDER, MYRON; TRAVEL TO- SERVE AS CONSULTANT AT RUTHER-FORD HIGH ENERGY LABORATORY, HARWELL, ENGLAND, JULY \$-\$1, 1978 (POJSOLJ); 6 MONTHS \$442

RISEBROUGH, ROBERT W; TRAVEL TO- VISIT MARINE STATION AT MARSEILLES AND WORK WITH DR. MONOD, APRIL MAY 1972 (VOJS757); 6 MONTHS \$986

GUNDERSON, E K ERIC; TRAVEL TO ATTEND. SCARITUPS SYMPOSI-UM ON HUMAN BIOLOGY AND MEDICINE IN THE ANTARCTIC, SCOTT POLAR RESEARCH INSTITUTE, CAMBRIDGE, ENGLAND, SEPTEMBER 19-21, 1974 (VOJ3766); 6 MONTHS \$741

SITES, MICHAEL J: TRAVEL SUPPORT TO ATTEND- SCAR SYMPOSI-UM ON ANTARCTIC TELECOMMUNICATIONS, SANDEFJORD, NORWAY, MAY 10-16, 1978 (VOI4853); 8 MONTHS \$835

VACQUIER, VICTOR D; TO ATTEND NATO ADVANCED STUDY IN-STITUTE ON MOLECULAR AND DEVELOPMENTAL BIOLOGY, ERICE, SICILY, JULY 27 - AUGUST 8, 1971 (Z002231); 6 MONTHS \$650

YAMARTINO, ROBERT J. TO ATTEND- NATO ADVANCED STUDY IN-STITUTE ON DUALITY IN ELEMENTARY PARTICLES, LOUYAIN, BELGI-UM, AUGUST 30 - SEPTEMBER 16, 1971 (Z002435); 6 MONTHS \$313

SANTI, DANIEL V; TO ATTEND- NATO ADVANCED STUDY INSTITUTE ON MOLECULAR AND DEVELOPMENTAL BIOLOGY, ERICE, SICILY, JULY 27 - AUGUST 8, 1971 (Z002244); 6 MONTHS \$732

PLACHY, WILLIAM Z; TO ATTEND. NATO ADVANCED STUDY IN-STITUTE ON ELECTRON SPIN RELAXATION IN LIQUIDS, SPATIND, NORWAY, AUGUST 16-28, 1971 (Z0028 17); 6 MONTHS \$560

SMITH, ROULETTE W; SYMPOSIUM ON HUMAN THINKING ST MAX. IMIN FRANCE AUGUST 17-20, 1971 (Z002250); 6 MONTHS \$402

CANDE, WILLIAM Z; TO ATTEND- NATO ADVANCED STUDY IN-STITUTE ON MODERN ASPECTS OF HORMONAL REGULATION IN PLANT GROWTH AND DEVELOPMENT, IZMIR, TURKEY, SEPTEMBER 40 -OCTOBER 1, 1971 (Z009255); 6 MONTHS \$564

LESSER, VICTOR R; TO ATTEND- NATO ADVANCED STUDY IN-STITUTE ON MICROPROGRAMMING, ST. RAPHAEL, FRANCE, AUGUST 30 -SEPTEMBER 10, 1971 (Z002256); 6 MONTHS \$565

HOPKINS, DAVID W; TO ATTEND. NATO ADVANCED STUDY IN-STITUTE ON PHYTOCHROME, ATHENS, GREECE, AUGUST 40 - SEP-TEMBER 17, 1971 (Z002257); 6 MONTHS \$566

SHANABARGER, MICKEY R; TO ATTEND- NATO ADVANCED STUDY INSTITUTE ON FUNDAMENTAL PRINCIPLES IN HETEROGENEOUS CATALYSIS, VENICE, ITALY, SEPTEMBER 19 - OCTOBER 4, 1971 (2004259); 6 MONTHS \$576

LIENTZ, BENNET P; ADV ST INST ON MATH PROG IN THEORY & PRACT COIMBRA PORTUGAL 6/12-24/78 (Z002541); 6 MONTHS \$256

MUENZ, LARRY R; ADV ST INST ON DISCRIMINANT ANALYSIS&AP-PLICATIONS ATHENS GR 6/8-20/72 (Z002542); 6 MONTHS \$761

FELDMAN, LEONARD; AND INTERNAT CONGRESS ON MATHEMATI-CAL EDUC EXETER ENGLAND 8/29-9/2/72 (2002546); 6 MONTHS \$510

DOWNS, FLOYD L; THE 2ND INTERNAL CONGRESS ON MATH ED EX-ETER ENG 8/29-9/2/72 (Z002549); 6 MONTHS \$444

PRESS, WILLIAM H; ADV ST INST ON BLACKHOLE ASTROPHYSICS LES HOUCHES FRANCE 1/31-8/30/12 (Z002565); 6 MONTHS \$437

LOH, ELWYN Y; ADV ST INST ON MOLE&CELL ASPECTS/IMMUNOL CARRY-LE-ROUET FRAN 6/1-10/78 (Z008568); 6 MONTHS \$489

LINZ, PETER; TO ATTEND- NATO ADVANCED STUDY INSTITUTE ON PADE APPROXIMANTS AND THEIR APPLICATIONS AT KENT, EN-GLAND JULY 2-10, 1972 (Z002569); 6 MONTHS \$289

GRAGG, WILLIAM B JR; TO ATTEND- NATO ADVANCED STUDY IN-STITUTE ON PADE APPROXIMANTS AND THEIR APPLICATIONS AT KENT, ENGLAND JULY 2-15, 1972 (2002575); 6 MONTHS \$518

AUSLANDER, DAVID M: TO ATTEND- NATO ADVANCED STUDY IN-STITUTE ON THEORY AND PRACTICE OF SYSTEMS IDENTIFICATION AND MODELLING AT TOULOUSE, FRANCE ON JULY 17-28, 1972 (Z002580); 6 MONTHS \$690

DOUGLAS, MARVIN H; TO ATTEND- NATO ADVANCED STUDY IN-STITUTE ON ELECTROMAGNETIC INTERACTIONS OF ELEMENTARY SYSTEMS AT CARGESE, FRANCE, JULY 2-29, 1972 (Z002584); 6 MONTHS \$545

THACKER, HARRY B JR; TO ATTEND- NATO ADVANCED STUDY IN-STITUTE ON HIGH-LIGHTS IN PARTICLE PHYSICS AT ERICE, ITALY, JULY 7-29, 1972 (Z002598); 6 MONTHS \$534

KLEIN, CLAUDETTE; TO ATTEND- NATO ADVANCED STUDY IN-STITUTE ON MOLECULAR AND CELL BIOLOGY AT SPETSAI, GREECE, AUGUST 18-29, 1972 (Z002603); 6 MONTHS \$771



### UNIVERSITY OF CALIFORNIA, RIVERSIDE

POLLAK, MICHAEL; TO ATTEND MEETING ON AMORPHOUS AND LIQUID SEMICONDUCTORS, LONDON, ENGLAND, DECEMBER 17-18, 1971 (HOJISES); 6 MONTHS \$570

### COLORADO

THOMPSON, RICHARD R: TO ATTEND: THE INTERNATIONAL COM-MITTEE FOR COAL PETROLOGY, KREFELD, GERMANY, AUGUST 20-28, 1971 (A030331); 6 MONTHS \$618

VONDER HAAR, THOMAS H; TRAVEL TO ATTEND-INTERNATIONAL RADIATION SYMPOSIUM, SENDAI, JAPAN, MAY 24 - JUNE 5, 1972

(Acuseus), 6 Months \$600

COX, STEPHEN K; TRAVEL TO ATTEND: INTERNATION.41, RADIA-TION SYMPOSIUM, SENDAI, JAPAN, MAY 88 - JUNE 4, 1972 (AG19785): 6 MONTHS \$713

MURCRAY, DAVID G; TRAVEL SUPPORT TO ATTEND- INTERNA-TIONAL RADIATION SYMPOSIUM, SENDAI, JAPAN, MAY 88 - JUNE 8, 1878 (A035786); 6 MONTHS \$870

PATTON, CARL E; TRAVEL TO ATTEND- INTERNATIONAL CON-PERENCE ON MAGNETICS, KYOTO AND FIFTH INTERNATIONAL COL-LOQUIUM ON MAGNETIC THIN FILMS, MT. FUJI, JAPAN, APRIL 10-19, 1972 (1403/054); 6 MONTHS 1842

CERMAK, J E; TO ATTEND THE THIRD INTERNATIONAL CON-FERENCE ON WIND EFFECTS ON BUILDINGS AND STRUCTURES, TOKYO, JAPAN, SEPTEMBER 6-11, 1911 (KOJO462); 6 MONTHS \$500

GUSTAFSON, KARL E; TO ATTEND A CONFERENCE ON LINEAR OPERATORS AND APPROXIMATION, OBERWOLFACH, GERMANY, AUGUST 14-24, 1971 (P040141); 6 MONTHS \$236

WALTON, HAROLD F; TO ATTEND-THE INTERNATIONAL CONGRESS OF ANALYTICAL CHEMISTRY, KYOTO, JAPAN, APRIL 3-3, 1978 (POJSSES); 6 MONTHS \$692

BOSE, RAJ C; TO ATTEND INSTITUTE ON FINITE GEOMETRIC STRUCTURES AND THEIR APPLICATIONS, BRESSANONE, ITALY, JUNE 18-87, 1972 (POJESJO); 6 MONTHS \$837

STICKLER, WILLIAM C; TRAVEL SUPPORT TO ATTEND THE AN-NUAL MEETING OF THE CHEMICAL SOCIETY AND THE ROYAL IN-STITUTE OF CHEMISTRY, MANCHESTER, ENGLAND, APRIL 10-14, 1972 (POLISTICS & MONTH'S \$997

MOHILNER, DAVID M; TRAVEL SUPPORT TO ATTEND. MEETING ON THE ELECTRICAL DOUBLE LAYER, BRISTOL, ENGLAND, APRIL 17-19, 1974 (P03753), 6 WONTHS \$336

LEMASURIER, WESLEY E: TO ATTEND- THE SYMPOSIUM ON THE GEOMORPHOLOGY OF POLAR REGIONS, ABERDEEN, SCOTLAND, JANUARY 4-9, 1971 (VOJ1104); 8 MONTHS 4650

KRIER, NICHOLAS; ADV ST INST ON FINITE GEOMETRIC STRUCT BRESSANONE ITALY 6/18-87/78 (Z008571): 6 MONTHS \$694

### CONNECTICUT

WATERMAN, TALBOT H; TRAVEL TO ATTEND-IAPSO SYMPOSIUM ON OPTICS OF THE SEA, COPENHAGEN, DENMARK, JUNE 19-84, 1972 (AGSS11); 6 MONTHS \$658

GILES, NORMAN HENRY; SECOND CONFERENCE OF THE USSR., SOCIETY OF GENETICS AND SELECTION, MOSCOW, USSR., JANUARY 31 - FEBRUARY 5, 1974 (BOJ2027); 8 MONTHS \$798

SCAVUZZO, RUDOLPH J; TO ATTEND- FIRST INTERNATIONAL CON-FERENCE ON STRUCTURAL MECHANICS IN REACTOR TECHNOLOGY BERLIN, GERMANY - SEPTEMBER 20-21, 1971 (KOJOZGI): 6 MONTHS \$230

AZABOFF, LEONID V: TO ATTEND- THE MEETING ON BAND-STRUC-TURE SPECTROSCOPY OF METALS AND ALLOYS, GLASGOW, SCOTLAND, SEPTEMBER 27-30, 1971 (KO30(48): 6 MONTHS \$450

GINGOLD, KURT; TO ATTEND- THE MEETING OF THE COUNCIL OF THE INTERNATIONAL FEDERATION OF TRANSLATORS AND THE IN-TERNATIONAL COLLOQUIUM OF TRANSLATORS. NICE, FRANCE, MAY 18-23, 1912 (NO14)14); 6 MONTHS \$431

LEA, KENNETH R; TRAVEL TO ATTEND- THE FOURTH INTERNA-FIONAL CONFERENCE ON ATOMIC MASSES AND FUNDAMENTAL CON-STANTS BEING HELD IN TEDDINGTON, ENGLAND, SEPTEMBER 6-10, 1911 (P000101): 6 NOTHS 2382

HARTE, JOHN: TRAVEL TO- CARRY ON RESEARCH AT EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH (CERN), GENEVA, SWITZERLAND, MAY 31 TO JULY 30, 1974 (PO34792); 6 MONTHS \$534

SINANOGLU, OKTAY: TRAVEL TO ATTEND: INTERNATIONAL CON-FERENCE ON MOLECULAR SPECTROSCOPY, WARSAW, POLAND, SEP-TEMBER 15-18, 1971 (POJ4881): 6 MONTHS \$682

DALTON, RICHARD J; TRAVEL TO- CONDUCT RESEARCH IN ROME,

ITALY, JULY 1-AUGUST 20, 1972 (SOS1220), 6 MONTHS \$668
BRASS, GARRETT W; TRAVEL TO ATTEND-INTERNATIONAL SYM-

POSIUM ON THE OCEANOGRAPHY OF THE SOUTH PACIFIC, WELLING-TON, NEW ZEALAND, FEBRUARY 9-15, 1912 (VOIZIFO): 6 MONTHS \$1,334 RAFSKY, LAWRENCE C: ADV ST INST ON DISCRIMINANT ANALYA

RAFSKY, LAWRENCE C; ADV ST INST ON DISCRIMINANT ANALY& APPLICAT ATHENS GREECE 6:8-20/72 (2002356); 6 MONTHS \$581

ROBERSON, CHARLES W: TO ATTEND. NATO ADVANCED STUDY IN-STITUTE ON PLASMA PHYSICS AT LES HOUCHES, FRANCE, JULY 2-29, 1374 (200460): 6 WONTHS 2333

#### DELAWARE

GREENFIELD, IRWIN G; TRAVEL TO ATTEND-INTERNATIONAL SYM-POSIUM ON DEFECT INTERACTIONS IN SOLIDS AND INDUSTRIAL METALLURGY, BANGALORE, INDIA, MAY 8-13, 1878 (HOJGGE); 6 MONTHS 81.302

LEVY, LEON S; TRAVEL TO ATTEND: CONFERENCE ON THEORY OF AUTOMATA, LANGUAGES, AND PROGRAMMING, ROCQUENCOURT, FRANCE, JULY 3-7, 1914 (JOJ4913); 8 MONTHS \$417

MOSZYNSKI, JERZY R; TO ATTEND- FIRST INDIAN NATIONAL CON-FERENCE ON HEAT AND MASS TRANSFER, MADRAS, INDIA, DECEMBER 8-8, 1971 (KOJ1889), 6 MONTHS \$323

STARK, ROBERT M; TRAVEL TO ATTEND- SIXTH INTERNATIONAL CONFERENCE ON OPERATIONS RESEARCH, DUBLIN, IRELAND, AUGUST 21-25, 1972 (KOJJIM); 6 MONTHS 1310

SANDLER, STANLEY 1; TO ATTEND NATO ADVANCED STUDY IN-STITUTE ON MOLECULAR DYNAMICS IN SIMPLE LIQUIDS AT MENTON, FRANCE, JULY #-13, 1814 (ZO08581); & MONTHS \$502

### DISTRICT OF COLUMBIA

LUKACS, EUGENE; TO ATTEND. THE NINTH INTERNATIONAL SYM-POSIUM ON FUNCTIONAL EQUATIONS, ROME AND PROCCHIO, ELBA, ITALY, SEPTEMBER 3-11, 1971 (PO30174); 6 MONTHS \$444

TUNSTALL, DANIEL B; TRAVEL TO ATTEND. SECOND MEETING OF THE ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOP-MENT SOCIAL INDICATOR WORKING PARTY PARIS, FRANCE, FEBRUARY 11-41, 1917 (SOSISSIS); 6 MONTHS \$850

KELLY, WILLIAM C: INTERNATL CONF ON UTILIZIHIGHLY-QUALIFIED PERS VENICE IT 10/25-27/1 (2002277), \$310

#### AMERICAN ANTHROPOLOGICAL ASSOCIATION

LEHMAN, EDWARD J; TRAVEL OF AMERICANS TO ATTEND- 'XL IN-TERNATIONAL CONGRESS OF AMERICANISTS; ROME, SEPTEMBER 3-2, 1972 (S033957), 12 MONTHS 45,000

### AMERICAN PSYCHOLOGICAL ASSOCIATION

LITTLE, KENNETH B; TRAVEL TO ATTEND. TWENTIETH INTERNA-TIONAL CONGRESS OF PSYCHOLOGY, JAPAN, AUGUST 1972 (BOJESSY); 12 MONTHS \$23,250

### LINGUISTIC SOCIETY OF AMERICA

SEBEOK, THOMAS A; TRAVEL OF U.S. SCIENTISTS TO ATTEND- THE ELEVENTH INTERNATIONAL CONGRESS OF LINGUISTS, BOLOGNA, ITALY, AUGUST 22 - SEPTEMBER 2, 1972 (SMISI7), 12 MONTHS \$9,000

NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL

ROWAN, EDMUND C; TRAVEL TO ATTEND. THE TWELFTH PACIFIC SCIENCE CONGRESS (C \$10213 001); \$5,000

MITCHELL, LAWRENCE C; SYMPOSIUM ON FOUNDATIONS OF THE ELECTRON THEORY OF SOLIDS, LENINGRAD AND MOSCOW, USSR, NOVEMBER 19 - DECEMBER 11, 1971 (C310223); 6 MONTHS \$4,600

MITCHELL, LAWRENCE C; SUPPORT OF TRAVEL OF U.S. PARTICI-PANTS TO THE SYMPOSIUM ON FOUNDATIONS OF THE ELECTRON THEORY OF SOLIDS, LENINGRAD AND MOSCOW, USSR, NOVEMBER 29-DECEMBER 11, 1971 (C110215 001): 6 MONTHS \$267

WAGONER, ANN; SUPPORT OF INTERNATIONAL UNION OF RADIO SCIENCE (CJ10232); 12 MONTHS \$20,000

SHEPPARD, HARVEY E; TRAVEL TO ATTEND-FOURTH INTERNA-TIONAL BIOPHYSICS CONGRESS, USSR, AUGUST 1972 (C10241); 6 MONTHS \$6,000

SHEPPARD, HARVEY E: TRAVEL TO ATTEND-SIXTH INTERNA-TIONAL CONGRESS ON PHOTOBIOLOGY, GERMANY, AUGUST 1972 (CJ10742): 7 MONTHS \$12,000

DYER, E R JR; SUPPORT OF U.S. PARTICIPATION IN THE XVTH GENERAL ASSEMBLY OF THE INTERNATIONAL ASTRONOMICAL UNION-AUGUST 1914, EXTRAORDINARY GENERAL ASSEMBLY-SEP-TEMBER 1974 (C310249); 24 MONTHS \$16,000

WOOD, GEORGE W; PARTIAL SUPPORT OF U.S. PARTICIPATION IN THE THIRTEENTH GENERAL ASSEMBLY AND CONGRESS OF THE IN-TERNATIONAL UNION FOR THEORETICAL AND APPLIED MECHANICS (CS10151); 9 MONTHS \$11,000

### FLORIDA

TAYLOR, DENNIS L; TO ATTEND SEVENTH INTERNATIONAL SEAWEED SYMPOSIUM, SAPPORO, JAPAN, AUGUST 7-13, 1971 (A030142); 8 MONTHS \$1,070

VERINK, ELLIS D JR; TRAVEL TO ATTEND-FIFTH INTERNATIONAL CONGRESS ON METALLIC CORROSION, TOKYO, JAPAN, MAY \$1-27, 1974 (HOJJ071); 6 MONTHS \$914

WISEMAN, H A B; TO ATTEND- (A) INTERNATIONAL CONFERENCE ON MECHANICAL BEHAVIOR OF MATERIALS, KYOTO, JAPAN, (B) NINTH INTERNATIONAL CONFERENCE ON MEDICAL AND BIOLOGI-CAL ENGINEERING, MELBOURNE, AUSTRALIA, (A) AUGUST 14-40- (B) AUGUST 13-47, 1971 (KOG1171); 6 MONTHS \$450

TESAR, DELBERT; TRAVEL TO VARIOUS RESEARCH CENTERS IN EASTERN EUROPE, MARCH - APRIL 1978 (KOJS198); 6 MONTHS \$520



WELTNER, WILLIAM JR; TO ATTEND TENTH INTERNATIONAL SYM-POSIUM ON FREE RADICALS, LYON, FRANCE, AUGUST 21 - SEP-TEMBER 3, 1911 (POSO143); 8 MONTHS \$381

BUTLER, GEORGE B; TRAVEL TO SYMPOSIUM ON MACROMOLECU-LAR CHEMISTRY, HELSINKI, FINLAND, JULY 2-8, 1878 (POS1681); 6 MONTHR SMA

SALTIEL, JACK; TRAVEL TO- FOURTH INTERNATIONAL SYMPOSIUM ON ORGANIC PHOTOCHEMISTRY, BADEN-BADEN, GERMANY, JULY 16-61. 1871 (POLITAIN- MONTHS 864)

DISTZ, ROBERT S; TRAVEL TO ATTEMP- INTERNATIONAL SYMPOSI-UM ON OCEANOGRAPHY OF THE SOUTH PACIFIC, WELLINGTON, NEW SEALAND, FEBRUARY 5-15, 1916 (VOSS178); 6 MONTHS \$1,220

WINCHESTER, JOHN W. TRAVEL TO ATTEND. THE SEVENTH SESSION OF THE INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION, PARIS, FRANCE, OCTOBER M. NOVEMBER 8, 1971 (XGI339); & MONTHS

SCHMIDT, ROBERT A: TO ATTEND NATO ADVANCED STUDY IN-STITUTE ON EPIDEMIOLOGY OF PLANT DISEASES, WAGENINGEN, THE NETHGRLANDS, AUGUST 84 SEPTEMBER 8, 1871 (2008288); 6 MONTHS 8451

SCHROECK, FRANKLIN E JR; TO ATTEND- NATO ADVANCED STUDY INSTITUTE ON MATHEMATICS OF CONTEMPORARY PHYSICS, LONDON, ENGLAND, AUGUST 13 - SEPTEMBER 11, 1971 (200147); 6 MONTHS \$508

LOPER, DAVID E; ADV ST INST ON MAG PHENOMENA IN ROTATING FLUIDS CAMB ENG 4/29-7/4/72 (2002152); 6 MONTHS \$586

CUNNINGHAM, JAMES R; TO ATTEND- NATO ADVANCED STUDY IN-STITUTE ON DECOMPOSITION AS A TOOL FOR SOLVING LARGE SCALE PROBLEMS AT CAMBRIDGE, ENGLAND, JULY 17-48, 1278 (2004574); 6 MONTHS 2548

#### GEORGIA

KOCH, GEORGE 8 JR; TRAVEL TO ATTEND- THE TENTH INTERNA-TIONAL SYMPOSIUM ON THE APPLICATION OF COMPUTER METHODS IN THE MINERAL INDUSTRY, JOHANNESBURG, SOUTH AFRICA, APRIL 3-14, 1873 (AG18770): 6 MONTHS \$726

GARRISON, ALLEN K; TO ATTEND- THE MEETING ON COLOUR CENTRES IN IONIC CRYSTALS, READING, ENGLAND, SEPTEMBER 6-10, 1971 (POJOSJE); 6 MONTHS \$565

HERCULÉS, DAVID M; TRAYEL TO ATTEND-THE INTERNATIONAL CONGRESS OF ANALYTICAL CHEMISTRY, KYOTO, JAPAN, APRIL 4-7, 1978 (POSESSE); 6 MONTHS \$1,012

ASHBY, E C; TRAVEL TO: FIRST IUPAC CONFERENCE ON PHYSICAL ORGANIC CHEMISTRY, CRANS SUR SIERRE, SWITZERLAND, SEPTEMBER 4-3, 1972 (POJMIZE); 6 MONTHS 4493

BRAGGIO, JOHN T; ADV ST INST ON PRIMATE GENETIC BIOLOGY TURIN ITALY 4/1-19/74 (2004570); 6 MONTHS \$4\$1

### HAWAH

SADLER, JAMES C; TO ATTEND- SEVENTH TECHNICAL CON-FERENCE ON HURRICANES AND TROPICAL METEOROLOGY, BAR-BADOS, WEST INDIES, DECEMBER 6-9, 1971 (A031641); 6 MONTHS \$673

BRETSCHNEIDER, CHARLES L; TRAVEL TO ATTEND-SYMPOSIUM ON THE PHYSICAL PROCESSES RESPONSIBLE FOR THE DISPERSAL OF POLLUTANTS IN THE SEA, AARHUS UNIVERSITY, DENMARK, JULY 4-8, 1972 (A014589); 6 MONTHS \$700

CHIU, ARTHUR N L; TO ATTEND- THE THIRD INTERNATIONAL CON-FERENCE ON WIND SFFECTS ON BUILDINGS AND STRUCTURES, TORYO, JAPAN, SEPTEMBER 4-11, 1821 (KOJO458); & MONTHS \$500

SCHWIND, PAUL J; TO ATTEND- NATO ADVANCED STUDY INSTITUTE ON RECENT DEVELOPMENTS IN REGIONAL SCIENCE AT KARLSRUHE, GERMANY, JULY 24, AUGUST 11, 1872 (Z008586); 6 MONTHS 1685

### **ILLINOIS**

MEYER, PETER; PARTIAL TRAVEL SUPPORT TO ATTEND-THE TWELFTH INTERNATIONAL CONFERENCE ON COSMIC RAYS. HOBART, TASMANIA, AUSTRALIA, AUGUST 1-27, 1971 (AGGGS97): 6 MONTHS \$1,093

LIU, CHAO-HAN; TRAVEL TO ATTEND- MEETING ON EFFECTS OF ACOUSTIC-GRAVITY WAVES ON ELECTROMAGNETIC WAVE PROPAGA-TION, WIESBADEN, GERMANY, APRIL 17-61, 1672 (AGG4668); 6 MONTHS 8667

RINEHART, KENNETH L JR; TRAVEL TO ATTEND- THE EIGHTH IN-TERNATIONAL SYMPOSIUM ON THE CHEMISTRY OF NATURAL PRODUCTS, INDIA, FEBRUARY 1912 (BOJ2198); 6 MONTHS \$1,223

SCHROEER, JUERGEN M: TRAVEL TO ATTEND-SECOND SYMPOSIUM ON SURFACE PHYSICS, ENSCHEDE, NETHERLANDS, JUNE 22-24, 1972, AND INTERNATIONAL CONFERENCE ON VACUUM INSTRUMENTS AND METHODS IN SURFACE STUDIES, GUILFORD, ENGLAND, JULY 10-12, 1972 (HO35019); 6 MONTHS 4452

BAZANT, ZDENEK P. TO ATTEND- FIRST INTERNATIONAL CON-FERENCE ON STRUCTURAL MECHANICS IN REACTOR TECHNOLOGY BERLIN, GERMANY - SEPTEMBER 20-24, 1871 (KOSO260); 6 MONTHS \$400

AGARWAL, GYAN C; TO ATTEND NINTH INTERNATIONAL CON-FERENCE ON MEDICAL AND BIOLOGICAL ENGINEERING-MEL-BOURNE, AUSTRALIA · AUGUST 43-87, 1971 (KG)-0846); 8 MONTHS \$700 DESCHAMPS, GEORGES A; TO ATTEND THE INTERNATIONAL SYM-POSIUM ON ELECTROMAGNETIC WAVE THEORY, TBILISI, USSR., SEP. TEMBER 5-18, 1971 (KOSO190): 6 MONTHS \$400

BANKOFF, S GEORGE: TO ATTEND. THE INTERNATIONAL SYMPOSI-UM ON TWO-PHASE SYSTEMS, HAIPA, ISRAEL, AUGUST 20 -SEP-TEMBER 8, 1971 (KOMUM): 6 MONTHS \$18

PARMELEE, RICHARD A: TO ATTEND- THE THIRD INTERNATIONAL CONFERENCE ON WIND EFFECTS ON BUILDINGS AND STRUCTURES, TOKYO, JAPAN, SEPTEMBER 6-11, 1971 (KONUS); 6 MONTHS \$500

ANO, ALFREDO H S; TO ATTEND THE THIRD INTERNATIONAL CON-FERENCE ON WIND EFFECTS ON BUILDINGS AND STRUCTURES, TOKYO, JAPAN, SEPTEMBER 4-11, 1871 (KOSO41); 6 MONTHS \$500

WOODHEAD, RONALD W. TRAVEL SUPPORT TO ATTEND-THE THIRD INTERNATIONAL CONGRESS ON PROJECT PLANNING BY NETWORK TECHNIQUES, STOCKHOLM, SWEDEN, MAY 16-18, 1878 (KOS688); 6 MONTHS \$760

WESTWATER, JAMES W: TRAVEL TO ATTEND- THE FIFTEENTH SIBERIAN THERMOPHYSICAL SEMINAR ON CRITICAL PHENOMENA IN TWO-PHASE SYSTEMS, NOVOSIBIRSK, USSR- MAY 28-26, 1978 (Konsen); 6 Months 5960

TAVLARIDES, LAWRENCE L; TRAVEL TO ATTEND: THE SECOND IN-TERNATIONAL SYMPOSIUM ON CHEMICAL REACTION ENGINEERING, AMSTERDAM, HOLLAND, MAY 2-4, 1972 (KG)1931); 6 MONTHS \$590

MURA, TOSHIO; TRAVEL TO ATTEND- EUROPHYSICS CONFERENCE ON DISCLINATIONS, AUSSOIS (SAVOIE), FRANCE, JUNE 81-83, 1878 (KOSSIIS): B MONTHS 1400

SUTTON, DAVID C; TO ATTEND. THE EIGHTH INTERNATIONAL CON-FERENCE ON HIGH ENERGY ACCELERATORS, GENEVA, SWITZER-LAND, SEPTEMBER 80-94, 1971 (POS0801); 8 MONTHS 8664

KUNZ, A BARRY; TO ATTEND THE MEETING ON COLOUR CENTRES IN IONIC CRYSTALS, READING, ENGLAND, SEPTEMBER 4-10, 1971 (PG\$0900); 6 MONTHS \$623

WISMAN, ROBERT A; TO ATTEND- MEETING ON MATHEMATICAL STATISTICS, OBERWOLFACH, WEST GERMANY, FEBRUARY 81-MARCF. 4, 1912 (POISSES); 6 MONTHS \$666

SMITH, DONALD E: TRAVEL TO ATTEND- THE SIXTH HEYROVSKY DISCUSSION, CASTLE LIBLICE, NEAR PRAGUE, CZECHOSLOVAKIA, MAY 25-26, 1972 (POS2745); 6 MONTHS \$626

IBERS, JAMES A; TRAVEL TO ATTEND-SYMPOSIUM ON CHEMISTRY OF HYDROFORMYLATION AND RELATED REACTIONS, VESEPREM, HUNGARY, MAY 30-JUNE 8, 1978 (POJS108); 6 MONTHS 8840

GOMER, ROBERT, TRAVEL SUPPORT TO ATTEND- ROYAL SOCIETY DISCUSSION ON PHYSICS AND CHEMISTRY OF SURFACES, LONDON, ENGLAND, MAY 24-21, 1972 (POSS676), 6 MONTHS 4424

FRIEDMAN, AVNER; TO ATTEND SYMPOSIUM ON PARTIAL DIF-FERENTIAL EQUATIONS AND GEOMETRY OF NORMED SPACES, HEBREW UNIVERSITY, JERUSALEM, ISRAEL, JUNE 19-48, 1912 (POSISSE); 6 MONTHS \$850

YANG, N.C. TRAVEL TO- FOURTH INTERNATIONAL SYMPOSIUM ON ORGANIC PHOTOCHEMISTRY, BADEN-BADEN, GERMANY, JULY 19-29, 1972 (PO\$1704), 6 MONTHS \$750

DICKEL, HELENE R: TRAVEL TO ATTEND- EIGHTEENTH INTERNA-TIONAL ASTROPHYSICAL SYMPOSIUM, LIEGE, BELGIUM, JUNE 26-27, 1874 (POSI788), 6 MONTHS \$762

HALPERN, JACK; TRAVEL TO- FIRST SUPAC CONFERENCE ON PHYSICAL ORGANIC CHEMISTRY, CRANS SUR SIERRE, SWITESRLAND SEPTEMBER 2-3, 1972 (POS 1825); 6 MONTHS \$667

BUTZER, KARL W; TO ATTEND- THE SEVENTH PANAFRICAN CON-GRESS ON PREHISTORY AND QUATERNARY STUDIES, ADDIS ABABA,

ETHIOPIA, DECEMBER 4-19, 1971 (SOS1399); 6 MONTHS \$898
SCHMIDT, STEPHEN C; TO ATTEND- 'ANNUAL MEETING OF THE
BRITISH AGRICULTURAL ECONOMICS SOCIETY' - OXFORD, ENGLAND,

JULY 7-10, 1972 (SOSSEIS), 6 MONTHS \$820
SHEN-MILLER, JANE: TO ATTEND- NATO ADVANCED STUDY INSTITUTE ON MODERN ASPECTS OF HORMONAL REGULATION IN
PLANT GROWTH AND DEVELOPMENT, IZMIR, TURKEY, SEPTEMBER 80

OCTOBER 1, 1971 (2001:45); 6 MONTHS \$449 ANTOS, GEORGE; NATO ADVANCED STUDY INSTITUTE ON FUNDA-MENTAL PRINCIPLES IN HETEROGENEOUS CATALYSIS, VENICE, ITA-LY, SEPTEMBER 19 - OCTOBER 1, 1971 (2001:43); 6 MONTHS \$317

LY, SEPTEMBER 19 - OCTOBER 1, 1971 (2001)9; 6 MONTHS \$317 GRIMES, CAROL J; ASI ON MAG RESONANCE IN INORGANIC CHEM

TERRHENIA ITALY \$187-415178 (2004536); 6 MONTHS \$520
BURKSTRAND, JAMES M; TO ATTEND-ADVANCED STUDY INSTITUTE
ON ELECTRON EMISSION SPECTROSCOPY AT GENT, BELGIUM, AU-

GUST 18-SEPTEMBER 8, 1971 (2008588); 6 MONTHS \$535 BRAUN. BARBARA 2; TO ATTEND- NATO ADVANCED STUDY IN-STITUTE ON PRIMARY MOLECULAR EVENTS IN PHOTOBIOLOGY AT S. FIMINGNANO, ITALY, SEPTEMBER 4-14, 1971 (2008590); 6 MONTHS \$668

### NORTHWESTERN UNIVERSITY

FREEMAN, ARTHUR J; SUPPORT OF TRAVEL OF U. S. PARTICIPANTS TO ATTEND-THE INTERNATIONAL CONFERENCE ON PERSPECTIVES FOR HYPERFINE INTERACTIONS IN MAGNETICALLY ORDERED SYSTEMS BY NMR AND OTHER METHODS (HO4):59; 12 MONTHS \$5,000

#### **INDIANA**

BOTH, CHARLES B: TRAVEL TO ATTEND- 1979 INTERNATIONAL CLAY CONFERENCE, MADRID, SPAIN, JUNE 25-30, 1972 (A03(1)16); 6 MONTHS

MORTENSON, LEONARD E; TRAVEL TO ATTEND- GOLDEN JUBILEE OF THE INDIAN INSTITUTE OF SCIENCE, BANGALORE, INDIA, DECEMBER 8-3, 1971 (BOJ1597); 6 MONTHS \$1,301

SAN PIETRO, ANTHONY, TRAVEL TO ATTEND GOLDEN JUBILES OF THE INDIAN INSTITUTE OF SCIENCE, BANGALORE, INVIA, DECEMBER (BOS1999): 6 MONTHS \$1,002

MASSEY, JAMES LEE, TO ATTEND. THE SECOND INTERNATIONAL SYMPOSIUM ON INFORMATION THEORY, TSAHKADSOR, ARMENIA, USSR., SEPTEMBER 8-3, 1971 (KOSO191); 6 MONTHS \$358

LEON, BENJAMIN J: TO ATTEND-THE 1971 IEEE INTERNATIONAL SYMPOSIUM ON ELECTRICAL NETWORK THEORY, LONDON, ENGLAND, SEPTEMBER 4-10, 1971 (KOJOLIP); 8 MONTHS \$200

COHEN, RAYMOND: TO ATTEND- THE SYMPOSIUM ON THE ACOUSTICS OF FLOW DUCTS, UNIVERSITY OF SOUTHAMPTON, EN-GLAND, JANUARY 10-14, 1878 (KOS1815); 6 MONTHS \$590

FLOSS, HEINZ, G; TRAVEL TO ATTEND. THE FOURTH INTERNA-TIONAL PERMENTATION SYMPOSIUM, KYOTO, JAPAN, MARCH 19-85, 1878 (KOSE147); 6 MONTHS \$850

TOEBES, GH; TRAVEL TO ATTEND-INTERNATIONAL SYMPOSIUM ON FLOW-INDUCED STRUCTURAL VIBRATIONS, KARLSRUHE, GERMANY, AUGUST 14-16, 1979 (KOSMPS); 6 MONTHS 6328

BROWNE, CORNELIUS P; TRAVEL TO ATTEND- THE FOURTH INTER-MATIONAL CONFERENCE ON ATOMIC MASSES AND FUNDAMENTAL CONSTANTS BRING HELD IN TEDDINGTON, ENGLAND SEPTEMBER 4-10, 1971 (POSOSOS); 6 MONTHS \$838

HIEFTJE, GARY M; TO ATTEND-THIRD INTERNATIONAL CONGRESS OF ATOMIC ABSORPTION AND FLUORESCENCE SPECTROSCOPY, PARIS, FRANCE, SEPTEMBER 17 - OCTOBER 1, 1871 (P050314); 6 MONTHS \$666

STOLL, WILHELM; CONFERENCE ON COMPLEX ANALYSIS IN SEVERAL VARIABLES, OBERWOLFACH, WEST GERMANY, SEPTEMBER 8-11, 1971 (PO30076); 6 MONTHS \$539

HALMOS, PAUL R; TO ATTEND- 1929 ST. ANDREWS COLLOQUIUM, ST. ANDREWS, SCOTLAND, JULY 19-29, 1978 (POSS199); 6 MONTHS 1644

FEHLNER, THOMAS P: TRAVEL TO-SPEND A SABBATICAL LEAVE AT OXFORD UNIVERSITY, OXFORD, ENGLAND, SEPTEMBER 1978 JANUARY 1978 (POSUSO): 12 MONTHS \$532

RAMDAS, A K; TRAVEL TO ATTEND- THIRD INTERNATIONAL CON-PERENCE ON RAMAN SPECTROSCOPY, REIMS, FRANCE, SEPTEMBER 8-19, 1978 (POLUE)); 6 MONTHS 1862

BENFEY, OTTO T; INTERNATIONAL SYMPOSIUM ON CHEMICAL EDUC SAO PAULO BRAZIL AUGUST 20, SEPTEMBER 2, 1271 (2002253); 6 MONTHS 2732

### **HOWA**

LONNGREN, KARL E; TO ATTEND. THE TENTH INTERNATIONAL CONFERENCE ON PHENOMENA IN IONIZED GASES, OXFORD, ENGLAND, SEPTEMBER 13-13, 1971 AND THE THIRD INTERNATIONAL CONFERENCE ON QUIESCENT PLASMAS, ELSINORE, DENMARK, SEPTEMBER 20-34, 1971 (KOSOLIT); & MONTHS 8580

WALTMAN, PAUL; TO ATTEND. CONFERENCE ON THE THEORY OF ORDINARY AND PARTIAL DIFFERENTIAL EQUATIONS, UNIVERSITY OF LUNDEE, SCOTLAND, MARCH 28-JI, 1972 (POSSICS), 6 MONTHS \$560

HANSEN, ROBERT S; TRAVEL TO- INTERNATIONAL CONFERENCE CHEMISTRY AT INTERFACES, JUNE 27-JULY 8, 1872, ROVINJ, YUGOSLAYIA (POSIS); 8 MONTHS \$661

STILLE, JOHN K; TRAVEL TO- INTERNATIONAL SYMPOSIUM ON MACROMOLECULES, HELSINKI, FINLAND, JULY 2-8, 1978 (PGJ4686); 6 MONTHS 4750

TOCK, RICHARD W; TO ATTEND- NATO ADVANCED STUDY IN-STITUTE ON CHARGED AND CATALYTIC POLYMERS, AT FORGES-LES-EAUX, FRANCE ON JUNE 18-88, 1978 (2008518); 6 MONTHS \$590

JOYCE, GLENN R; TO ATTEND- NATO ADVANCED STUDY INSTITUTE ON PLASMA PHYSICS AT LES HOUCHES, FRANCE, JULY 2-29, 1972 (\$002595); 6 MONTHS \$466

### KANSAS

HOFFMANN, ROBERT 8; TRAVEL TO ATTEND- INTERNATIONAL SYM-POSIUM ON SPECIES AND ZOOGEOGRAPHY OF EUROPEAN MAMMALS, CZECHOSLOVAKIA, NOVEMBER 1971 (BOJIS79); 6 MONTHS \$843

DAYIS, JOHN C: TO ATTEND THIRD INTERNATIONAL CONGRESS FOR STEREOLOGY - BERNE, SWITZERLAND, AUGUST 26-31, 197 (K030089); 4 MONTHS \$370

DAVIS, JOHN C: TRAVEL TO ATTEND CONFERENCE ON MACHINE PERCEPTION OF PATTERNS AND PICTURES, TEDDINGTON, ENGLAND APRIL 18-14, 1878 (KOJ\$\$\$); 6 MONTHS \$470

BIGGS, ALBERT W; TRAVEL SUPPORT TO ATTEND- 'SCAR SYMPOSI-UM ON ANTARCTIC TELECOMMUNICATIONS,' SANDEFJORD, NORWAY, MAY 10-14, 1972 (V035748); 6 MONTHS \$728 MORROW, JOHN; TO ATTEND- NATO ADVANCED STUDY INSTITUTE ON MOLECULAR AND DEVELOPMENTAL BIOLOGY, ERICE, SICILY, JULY 87 - AUGUST 8, 1971 (ZO02838); 6 MONTHS 8060

#### KENTUCKY

REUCROFT, PHILIP J; TRAVEL TO ATTEND-THIRD INTERNATIONAL SYMPOSIUM ON THE CHEMISTRY OF THE ORGANIC SOLID STATE, GLASCOW, SCOTLAND, SEPTEMBER 18-42, 1978 (HOJ444); 6 MONTHS \$664

LIENHARD, JOHN H; TRAVEL TO ATTEND THE FIFTEENTH SIBERI-AN THERMOPHYSICAL SEMINAR ON CRITICAL PHENOMENA IN TWO-PHASE SYSTEMS, NOVOSIBIRSK, USSR. MAY 28-26, 1978 (KON8955); 6 MONTHS 8400

WETS, ROGER J; TO ATTEND- THE FOURTH CONFERENCE ON PROBABILITY THEORY, BRASOV, ROMANIA, SEPTEMBER 12-18, 1971 (PG30586); 6 MONTHS \$768

### LOUISIANA

PILLER, HERBERT; TRAVEL TO ATTEND-INTERNATIONAL CONFERENCE ON THE PHYSICS OF SEMICONDUCTORS, WARSAW, POLAND, JULY 25-29, 1979 (HOS1799); 6 MONTHS 1921

PERRY, CHARLES L. INTERNATIONAL ASTRONOMICAL UNION SYM-POSIUM ON SPECTRAL CLASSIFICATION AND MULTICOLOR PHOTOMETRY, CORDOBA, ARGENTINA, OCTOBER 18-84, 1971 (POSOB19); 6 MONTHS \$149

WEST, PHILIP W; TO ATTEND- THE INTERNATIONAL CONGRESS OF ANALYTICAL CHEMISTRY, KYOTO, JAPAN, APRIL 8-7, 1978 (POISSES); & MONTHS 8849

ZEBOUNI, NADIM H; TO ATTEND- NATO ADVANCED STUDY IN-STITUTE ON FUNDAMENTAL PRINCIPLES IN HETEROGENEOUS CATALYSIS, VENICE, ITALY, SEPTEMBER 19 - OCTOBER 2, 1971 (2001161); 6 MONTHS \$88?

### MARYLAND

RODENHUIS, DAVID R; TO ATTEND SEVENTH TECHNICAL CON-FERENCE ON HURRICANES AND TROPICAL METEOR, BARBADOS, WEST INDIES, DECEMBER 4-9, 1971 (A031690); 8 MONTHS \$241

CARTER, HARRY H; TRAVEL TO ATTEND MEETING OF THE INTER-NATIONAL COUNCIL FOR THE EXPLORATION OF THE SEA (ICES), AARHUS, DENMARK, JULY 3-8, 1978 (A033072); 6 MONTHS \$672

OKUBO, AKIRA; TRAVEL TO ATTEND-SYMPOSIUM ON THE PHYSICAL PROCESSES RESPONSIBLE FOR THE DISPERSAL OF POLLUTANTS IN THE SEA, ARRHUS UNIVERSITY, DENMARK, JULY 3-3, 1978 (A034954); 6 MONTHS 8517

OKUBO, AKIRA; TRAVEL TO ATTEND SYMPOSIUM ON THE PHYSICAL PROCESSES RESPONSIBLE FOR THE DISPERSAL OF POLLUTANTS IN THE SEA. AARHUS UNIVERSITY, DENMARK, JULY 3-3, 1978 (A039252 001); \$160

DEUTSCH, EDWARD S; TRAVEL SUPPORT TO ATTEND-CONFERENCE ON MACHINE PERCEPTION OF PATTERNS AND PICTURES, TEDDING-TON, MIDDLESEX, ENGLAND, APRIL 12-14, 1919 (JOSSET): 6 MONTHS \$593 ZORN, GUS T: TO ATTEND-THE EIGHTH INTERNATIONAL CON-FERENCE ON HIGH ENERGY ACCELERATORS, GENEVA, SWITZER-LAND, SEPTEMBER 20-24, 1971 (PG90808): 6 MONTHS \$598

WALKER, JAMES C; TO ATTEND FOURTH INTERNATIONAL CON-FERENCE ON MOSSBAUER SPECTROSCOPY, DRESDEN, GERMAN DEMOCRATIC REPUBLIC, SEPTEMBER 10-15, 1971 (POSITIO); 6 MONTHS \$565

BAILEY, WILLIAM J; TRAVEL TO INTERNATIONAL SYMPOSIUM ON MACROMOLECULES, HELSINKI, FINLAND, JULY 8-9, 1979 (POSISSE); 6 MONTHS 8450

GARDNER, MARJORIE; INTERNATIONAL SYMPOSIUM ON CHEMICAL EDUCATION SAO PAULO BRAZIL AUGUST 30 · SEPTEMBER 3, 1971 (Z00253); 6 MONTHS \$538

CHRZANOWSKI, PAUL; TO ATTEND- NATO ADVANCED STUDY IN-STITUTE ON BLACKHOLE ASTROPHYSICS AT LES HOUCHES, FRANCE JULY 81 - AUGUST 30, 1972 (Z002525); 6 MONTHS \$247

ENTOMOLOGICAL SOCIETY OF AMERICA

MURDOCH, WALLACE P; TRAVEL TO ATTEND-FOURTEENTH INTER-NATIONAL CONGRESS OF ENTOMOLOGY, AUSTRALIA, AUGUST 1978 (BG33878); 12 MONTHS \$10,000

### MASSACHUSETTS

BERGGREN, WILLIAM A; TO ATTEND- THE COLLOQUIUM ON THE NEOGENE-QUATERNARY BOUNDARY, KISHINEY, U.S.S.R., MAY 22 - JUNE 6, 1972 (AGJ221); 6 MONTHS \$1,130

KALCKAR, HERMAN M; TO ATTEND- SYMPOSIUM ON THE BIOCHEMISTRY OF GLYCOSIDIC LINKAGES, SAN CARLOS DE BARILOCHE, ARGENTINA, NOVEMBER 3, 1971 THROUGH NOVEMBER 11, 1971 (BCS1885); 6 MONTHS \$758

STROMINGER, JACK L; TO ATTEND-SYMPOSIUM ON THE BIOCHEMISTRY OF GLYCOSIDIC LINKAGES, SAN CARLOS DE BARILOCHE, ARGENTINA, NOVEMBER 8, 1971 THROUGH NOVEMBER 11, 1971 (BOS 1586); 6 MONTHS \$696



SUSSMAN, MAURICE, TO ATTEND-SYMPOSIUM ON THE BIOCHEMISTRY OF CLYCOSIDIC LINKAGES, SAN CARLOS DE BARILOCHE, ARGENTINA, NOVEMBER 1, 1871 (BOSISEY), 6 MONTHS \$818

PENMAN, SHELDON; INTERNATIONAL MEETING ON BIOCHEMISTRY OF GENE EXPRESSION IN HIGHER ORGANISMS (BOSSISS); 6 MONTHS 8479

UHLIG, HERBERT H; TRAVEL TO ATTEND FIFTH INTERNATIONAL CONGRESS ON METALLIC CORROSION, TOKYO, JAPAN, MAY 21-27, 1972 (MOSSORO): 6 MONTHS 5831

TEICHOLZ, ERIC; TO ATTEND. THE U.S. COMPUTER AIDED DESIGN AND COMPUTER GRAPHICS EXHIBITION, LONDON, ENGLAND, JANUA-RY 31 - FEBRUARY 4, 1974 (JO04310); 6 MONTHS \$446

BOOK, RONALD V; TRAVEL TO ATTEND-SYMPOSIUM ON AUTOMATA THEORY, LANGUAGES, AND PROGRAMMING, ROCQUENCOURT, FRANCE, JULY 4-7, 1978 (JOJ4678); 6 MONTHS 4400

CORNELL, CALLIN; TO ATTEND INTERNATIONAL CONFERENCE ON APPLICATIONS OF STATISTICS AND PROBABILITY TO SOIL AND STRUCTURAL ENGINEERING, HONG KONG, BRITISH CROWN COLONY,

ASIA - SEPTEMBER 13-17, 1971 (KONGOR); 6 MONTHS \$750 KENNEDY, ROBERT S; TO ATTEND-THE SECOND INTERNATIONAL SYMPOSIUM ON INFORMATION THEORY, TSAHKADSOR, ARMENIA, USSR, SEPTEIJBER 2-3, 1971 (KONGURY; 6 MONTHS \$450

DIETZ, ALBERT G H; TRAVEL TO ATTEND. INTERNATIONAL SEMINAR, FUTURE OF PLASTICS IN BUILDING, COPENHAGEN, DENMARK, APRIL 12, 1872 (KOS2455), 6 MONTHS \$520

NEWTON, GEORGE C JR; TRAVEL SUPPORT TO ATTEND- FIFTH WORLD CONGRESS OF THE INTERNATIONAL FEDERATION OF AUTO-MATIC CONTROL, PARIS, FRANCE, JUNE 18-17, 1872 (KOJJ)40): 6 MONTHS \$110

STEEL, COLIN; TO ATTEND- SIXTH INTERNATIONAL CONFERENCE ON PHOTOCHEMISTRY, BORDEAUX, FRANCE, SEPTEMBER 6-3, 1971 (POSO160); 6 MONTHS \$489

STANLEY, HEUGENE, TO ATTEND THE INTERNATIONAL SEMINAR ON STATISTICAL MECHANICS AND FIELD THEORY, HAIFA, ISRAEL, JULY 43-AUGUST 6, 1971 (PO30698): 6 MONTHS 3613

STERNHEIM, MORTON M; TO ATTEND- THE FOURTH INTERNA-TIONAL CONFERENCE ON HIGH ENERGY PHYSICS AND NUCLEAR STRUCTURE, DUBNA, USSR. SEPTEMBER 7-11, 1971 (POSOSS); 12 MONTHS \$1.051

VAN BLERKOM, DAVID J; TO ATTEND- THE INTERNATIONAL SYM-POSIUM ON WOLF-RAYET AND HOT STARS, LA PLATA, ARGENTINA, AUGUST 18-81, 1971 (P930371): 6 MONTHS \$140

HAJIAN, ARSHAG; SECOND INTERNATIONAL SYMPOSIUM ON INFOR-MATION THEORY, TSAHKADSOR, ARMENIA, U.S.R., SEPTEMBER 4-8, 1911 (PO30661); 6 MONTHS \$899

HUME, DAVID N; TO ATTEND- THE INTERNATIONAL CONGRESS OF ANALYTICAL CHEMISTRY, KYOTO, JAPAN, APRIL 3-1, 1918 (POISIBA); 6

GRINDLAY, JONATHAN E, TRAVEL TO DO RESEARCH WITH PROF. BROWN, UNIVERSITY OF SYDNEY, AUSTRALIA, MARCH-AUGUST, 1972 (POSS921): 6 MONTHS \$1.361

FRIEDMAN, MARVIN H; TRAYEL TO ATTEND- FOURTH INTERNA-TIONAL CONFERENCE ON HIGH ENERGY COLLISIONS (STONY BROOK SERIES), OXFORD, ENGLAND, APRIL 5-7, 1978 (Possess); 6 MONTILS \$273

STEIN, ROBERT F; INTERNATIONAL TRAVEL TO- CARRY ON RESEARCH ON THE INTERSTELLAR MEDIUM AT 10TA (CAMBRIDGE, ENGLAND) (POJISST); 6 MONTHS \$304

DEWALD, ROBERT R; TRAYEL TO- CONFERENCE ON NATURE OF METAL-AMMONIA SOLUTIONS- COLLOQUIUM WEYL III, UPPER GALILEE, ISRAEL, JUNE 10-13, 1076 (POS 1700); 6 MONTHS \$967

WAROLE, JOHN F C; TRAVEL SUPPORT TO MAKE OBSERVATIONS WITH THE WESTERBORK SYNTHESIS RADIO TELESCOPE AT LEIDEN, HOLLAND, JULY AND AUGUST 1978 (POJ1787); 8 MONTHS \$636

BARTLETT, PAUL D; TRAVEL TO-FIRST IUPAC CONFERENCE ON PHYSICAL-ORGANIC CHEMISTRY, CRANS SUR SIERRE, SWITZERLAND, SEPTEMBER 4-5, 1974 (POS-1845); 6 MONTHS \$526

LIEBERMAN, DAVID I; TO ATTEND ANNUAL RESEARCH CON-FERENCE IN ALGEBRA, BONN, GERMANY, JUNE 9-18, 1972 (POJ4849); 6 MONTHS \$600

WAUGH, JOHN S; TRAVEL TO ATTEND- SEVENTEENTH CONGRESS AMPERE, TURKU, FINLAND, AUGUST 21-26, 1978 (POSISSI); 6 MONTHS 8735.

PIENSTRA, M HOWARD; TRAYEL TO CONDUCT RESEARCH IN ARCHIVES, ROME, JANUARY 5-29, 1978 (SOJ1981); 6 MONTHS \$525

EMERY, K O; TRAVEL TO ATTEND-SEVENTH SESSION OF THE IN-TERGOVERNMENTAL OCEANOGRAPHIC COMMISSION, PARIS, FRANCE, OCTOBER 23 - NOVEMBER 6, 1971 (XOJS23); 8 MONTHS \$752

WEBSTER, FERRIS: TO ATTEND-THE SEVENTH SESSION OF THE IN-TERGOVERNMENTAL OCEANOGRAPHIC COMMISSION, PARIS, FRANCE, OCTOBER 26 - NOVEMBER 5, 1871 (XOJISJS): 6 MONTHS \$913

FRIEDMAN, KENNETH A; TO ATTEND- NATO ADVANCED STUDY IN-STITUTE ON DUALITY IN ELEMENTARY PARTICLES, LOUVAIN, BELGI-UM, AUGUST 30 - SEPTEMBER 16, 1971 (2002241), 6 MONTHS \$372

BLACK, JOHN HARRY; TO ATTEND- NATO ADVANCED STUDY IN-STITUTE ON ATOMS AND MOLECULES IN ASTROPHYSICS, STIRLING, SCOTLAND, AUGUST 1-21, 1871 (200887); 6 MONTHS \$343 GARDNER, GARY M; TO ATTEND NATO ADVANCED STUDY IN-STITUTE ON PHYTOCHROME, ATHENS, GREECE, AUGUST 40 - SEP-TEMBER 17, 1971 (200824); 6 MONTHS \$450

MACQUEEN, DAVID B. TO ATTEND NATO ADVANCED STUDY IN-STITUTE ON MATHEMATICAL LOGIC, CAMERIDGE, ENGLAND, AUGUST 1-21, 1971 (2001215), 6 MONTHS \$203

FOSTER, JAMES N; ASI ON CONT DRIFT SEA-FLR SPREAD&PLATE TECT IMPLIC FOR E-SCI 410-1419 (2004)910; 6 MONTHS 4477

GANS, ROGER F: ADV ST INST ON MAG PHENOMENA IN ROTATING FLDS CAMB ENG 6/16-7/4/12 (Z00254), 6 MONTHS \$593

JAFFE, JACK; ADV ST INST ON COSMOLAGRAVITATION COSMOLOG MODELS ERICE IT \$110-80/78 (E008348); 6 MONTHS \$488

SETZER, CHARLES B. ASI MOD FUNCTII VARIABLE&ARITHMET AP-PLIC ANTWERP BELG 7/17-808/78 (Z008551); 6 MONTHS \$322

ROSENBERG, MARLENE; HIGH ENERGY ASTROPHYSEITS REL TO ELEM PARTICLE PHY ERICE SIC 4116-1414 (2004-41); 6 MONTHS 417 HOVIS, QUY L; TO ATTEND- NATO ADVANCED STUDY INSTITUTE ON

FELDSPARS AT MANCHESTER, ENGLAND JULY 11-49, 1978 (2008578); \$438 KEYES, THOMAS F; TO ATTEND- NATO ADVANCED STUDY IN-STITUTE ON MOLECULAR DYNAMICS IN SIMPLE LIQUIDS AT MENTON, FRANCE, JULY 3-19, 1978 (200860); 6 MONTHS \$372

#### AMERICAN METEOROLOGICAL SOCIETY

SPENGLER, KENNETH C; TRAVEL SUPPORT FOR U.S. AUSTRALIA
WEATHER MODIFICATION CONFERENCE (1030381); 6 MONTHS \$16,000

#### MICHIGAN

BECK, CHARLES B; TO ATTEND-THE SILVER JUBILEE OF THE BIRBAL SAHNI INSTITUTE OF PALEOBOTANY, LUCKNOW, INDIA, DECEMBER 5-11, 1971 (BOJISSS); 6 MONTHS BLO46

SPARROW, FREDERICK K; TRAVEL TO ATTEND-MARINE MYCOLOGY SYMPOSIUM, BREMERHAVEN, GERMANY, SEPTEMBER 1976 (8034749); 6 MONTHS 1644

RUSSELL, JOEL W; TO DEVELOP COOPERATIVE RESEARCH PROJECT WITH SCIENTISTS AT THE AUSTRALIAN NATIONAL UNIVERSITY, CAN-BERRA, AUSTRALIA (FOJL)00; 18 MONTHS \$1,353

SACHS, HERBERT K; TO ATTEND SECOND INTERNATIONAL CON-FERENCE ON VEHICLE MECHANICS - PARIS, FRANCE SEPTEMBER 4-10, 1971 (KOSONOY): 6 MONTHS \$310

PATTON, JOHN T; TRAVEL TO ATTEND- THE FOURTH INTERNA-TIONAL FERMENTATION SYMPOSIUM, KYOTO, JAPAN, MARCH 19-85, 1972 (KOSE185); 6 MONTHS \$630

YEH, GREGORY S Y; TO ATTEND NINTH IUPAC MICROSYMPOSIUM ON MACROMOLECULES, PRAGUE, CZECHOSLOVAKIA, SEPTEMBER 6-9, 1971 (POSOLIT); 6 MONTHS \$660

RICH, ARTHUR; TRAVEL TO ATTEND-THE FOURTH INTERNATIONAL CONFERENCE ON ATOMIC MASSES AND FUNDAMENTAL CONSTANTS BEING HELD IN TEDDINGTON, ENGLAND, SEPTEMBER 6-10, 1971 (POMOLOS); 12 MONTHS \$688

BARTELL, LAWRENCE S; TRAVEL SUPPORT TO- LECTURE AT MOSCOW STATE UNIVERSITY AND TO ATTEND THE SIXTH HUNGARI-AN CONFERENCE ON X-RAYS, ELECTRON, AND NEUTRON DIFFRACTION, MAY 15-JUNE 13, 1972 (POSS669), 6 MONTHS \$561

JOHNSON, CARL R: TRAVEL SUPPORT TO ATTEND- FIFTH SYMPOSI-UM ON ORGANIC SULFUR CHEMISTRY, LUND, SWEDEN, JUNE 8-9, 1972 (POISTOIL): 6 MONTHS 6662

HART, HAROLD; TRAVEL TO-FOURTH INTERNATIONAL SYMPOSIUM ON PHOTOCHEMISTRY, BADEN-BADEN, GERMANY, JULY 16-84, 1972 (POS4706); 6 MONTHS \$726

FORD, GEORGE W: TRAYEL TO ATTEND- BOLTZMANN EQUATION SYMPOSIUM, VIENNA, AUSTRIA, SEPTEMBER 4-5, 1972 (POJSO14): 12 MONTHS 1982

MORGAN, JAMES N; TO ATTEND "NINTH INTERNATIONAL CONGRESS OF GERONTOLOGY," KIEV, USSR, JULY 2-7, 1972 (S039360); 12 MONTHS \$650 JURDY, DONNA M; TO ATTEND ADVANCED STUDY INSTITUTE ON CONTINENTAL DRIFT, SEA-FLOOR SPREADING AND PLATE TECTONICS-IMPLICATIONS FOR EARTH SCIENCE AT NEWCASTLE UPON TYNE, UR. (200537); 6 MONTHS \$302

WOODBY, LAUREN G. and Internate Congress on Mathemati-CAL EDUC EXETER ENGLAND 8/89-8/8/78 (Z008547); 6 MONTHS \$360

WEISS, MARK L; ADV ST INST ON PRIMATE GENETIC BIOLOGY TURIN ITALY 6/7-18/78 (Z008550); 6 MONTHS \$334

CARROLL, RAYMOND, TO ATTEND NATO ADVANCED STUDY IN-STITUTE ON ELECTROMAGNETIC INTERACTIONS OF ELEMENTARY SYSTEMS AT CARGESE, FRANCE, JULY 2-29, 1972 (2002597); 6 MONTHS 236A

### MINNESOTA

HILL, REUBEN; TRAVEL TO ATTEND- MEETING OF THE INTERNA-TIONAL SOCIOLOGICAL ASSOCIATION, MILAN, ITALY TWELFTH INTER-NATIONAL FAMILY RESEARCH SEMINAR, MOSCOW, USSR, APRIL 12-15 AND APRIL 12-23, 1972 (F0312903); & MONTHS \$903

GERBERICH, WILLIAM W: TRAVEL TO ATTEND- CONFERENCE ON FAILURE OF FIBRE REINFORCED COMPOSITE MATERIALS, UNIVERSITY OF SURREY, GUILDFORD, ENGLAND, JULY 17-19, 1972 (HOSSISS); 6 MONTHS \$523



LEE, E BRUCE; TO ATTEND THE - FIFTH ALL-UNION CONFERENCE ON CONTROL PROBLEMS, MOSCOW, USAR, OCTOBER & THROUGH OC-TOBER 4. 1921 (ROSSAS): 6 MONTHS \$460

LAMBERT, ROBERT F; TO ATTEND-THE MEETING ON ACOUSTICS OF FLOW DUCTS, UNIVERSITY OF SOUTHAMPTON, ENGLAND, JANUARY

PENDER, EMIL: TRAVEL TO ATTEND. FIFTH ALL UNION CON-FERENCE ON LOW TEMPERATURE PLASMA GENERATORS, NOVOSIBIRAS, U.S.S.R., JUNE 44-JO, 1874 (KOJSSJI); 6 MONTHS \$460

MCGEREE, RICHARD PAUL; TO ATTEND- INTERNATIONAL SYMPOSI-UM ON DYNAMICAL SYSTEMS, SALVADOR, BRAZIL, JULY 20 - AUGUST

14, 1971 (POJOJ97); 6 MONTHS \$658

WEINBERGER, HANS F: TO ATTEND- SYMPOSIUM ON CONTINUUM MECHANICS AND RELATED PROBLEMS OF ANALYSIS, TBILISI, GEOR-GIA, USSR., SEPTEMBER #4-10, 1971 (POSOSOS): 6 MONTHS \$971

PARISH, LESLIE J; TRAVEL SUPPORT TO WORK WITH PROFESSOR L. H. NOSANOW AT THE UNIVERSITY OF SUSSEX, ENGLAND, FEBRUARY-

MARCH, 1878 (POSE750); 12 MONTHS \$275 DAVIS, H TED; TRAVEL TO-CONFERENCE ON NATURE OF METAL-AMMONIA SOLUTIONS- COLLOQUIUM WEYL III, UPPER GALILEE, ISRAEL, JUNE 19-83, 1978 (PO31701); 6 MONTHS \$1,174

CRAWFORD, BRYCE JR. TRAVEL TO ATTEND INTERNATIONAL SUMMER SCHOOL ON MOLECULAR DYNAMICS IN SIMPLE LIQUIDS,

MENTON, FRANCE, JULY 4-13, 1974 (POUNTS); & MONTHS \$850 BILL, REUBEN; TRAVEL TO ATTEND-'INTERNATIONAL SOCIOLOGI-CAL CONFERENCE ON MODERNIZATION! WARSAW, POLAND, JUNE 11-18, 1978 (S053541); 6 MONTHS \$945

MIKKELSON, RAYMOND C: TO ATTEND. NATO ADVANCED STUDY IN-STITUTE ON INTERACTION OF ENERGETIC CHARGED PARTICLES WITH SOLIDS, ISTANBUL, TURKEY, AUGUST 18-28, 1911 (ZOORESS); 6 MONTHS 1883

### MISSISSIPPI

YOUNG, POH SHIEN; TRAVEL TO ATTEND- EIGHTH INTERNATIONAL CONFERENCE ON NUCLEAR PHOTOGRAPHY AND SOLID STATE TRACK DETECTORS, BUCHAREST, RUMANIA, JULY 10-15, 1912 (POS1889); 6 MONTHS 8344

### MISSOURI

MUHLESTEIN, LEWIS D. TRAVEL SUPPORT TO ATTEND. THE FIFTH IABA SYMPOSIUM ON NEUTRON INELASTIC SCATTERING, GRENOBLE,

FRANCE, MARCH 6-10, 1974 (Hotelia); 6 NONTHS \$100 MULLER, MARCEL W; TRAVEL TO ATTEND- 1978 INTERNATIONAL CONFERENCE ON MAGNETICS, KYOTO, JAPAN, APRIL 10-14, 1972 (HOSSON), & MONTHS \$509

KREIDL, NORBERT J; TRAVEL TO ATTEND- ANNUAL MEETING OF THE INTERNATIONAL COMMISSION ON GLASS, WIESBADEN, GER-MANY, JULY 3-8, 1974 (HOSSIST); 6 MONTHS \$464

LEE, SOOK; TRAVEL TO ATTEND. THE SEVENTEENTH COLLOQUE AMPERE, UNIVERSITY OF TURKU, FINLAND, AUGUST 21-26, 1972

(H031758); 6 MONTHS \$873 KREIDL, NORBERT J; TO ATTEND THE NINTH INTERNATIONAL CONGRESS ON GLASS, PARIS, FRANCE, SEPTEMBER 27 - OCTOBER 4,

1971 (K030468); 8 MONTHS \$480 BULL, STANLEY R; TO ATTEND- IAEA SEMINAR ON NUMERICAL REACTOR CALCULATIONS, VIENNA, AUSTRIA, JANUARY 17-91, 1978

(KOJ(451); 6 MONTHS \$400 SUMMERS, DAVID A: TRAVEL TO ATTEND. INTERNATIONAL SYM-POSIUM ON JET CUTTING TECHNOLOGY, COVENTRY, ENGLAND, APRIL 4-7, 1972 (KO22356); 6 MONTHS \$320

### **NEBRASKA**

SCHULTZ, C BERTRAND; TRAVEL TO ATTEND-INTERNATIONAL COL-LOQUIUM (INQUA). THE BOUNDARY BETWEEN THE NEOGENE AND QUATERNARY, U.S.R. ACADEMY OF SCIENCES, MAY 81 JUNE 5, 1972 (Additio); 6 MONTHS \$982

### NEVADA

TELFORD, JAMES W; TRAVEL TO ATTEND- INTERNATIONAL CLOUD FHYSICS CONFERENCE, LONDON, ENGLAND. AUGUST 21-26, 1972 (A03(184), 6 MONTHS \$927

MOUSSET-JONES, PIERRE F X; TRAYEL TO ATTEND-TENTH INTER-NATIONAL SYMPOSIUM ON COMPUTER APPLICATIONS IN MINERAL INDUSTRY, JOHANNESBURG, SOUTH AFRICA, APRIL 1974 (JOSESTY): 6 MONTRS \$1.114

### **NEW KAMPSHIRE**

FLANDERS, STEPHEN N; TO ATTEND- ADVANCED STUDY INSTITUTE ON SYSTEM DYNAMICS-A METHODOLOGY FOR ANALYSIS OF COMPLEX SOCIAL SYSTEMS AT HANOVER, GERMANY ON JULY JO-AUGUST 11, 1978 (2001540); 6 MONTHS \$512

### **NEW JERSEY**

MILLS, EDWIN S; TRAVEL TO ATTEND- INTERNATIONAL ECONOMIC ASSOCIATION MEETING ON ENVIRONMENT AND URBANIZATION, COPENHAGEN, DENMARK, JUNE 19-24, 1972 (FOI 4397); 6 MONTHS \$681

STAR, AURA E: TRAVEL TO ATTEND- INTERNATIONAL SYMPOSIUM ON CHEMISTRY, EVOLUTION AND SYSTEMATICS, STRASBOURG, FRANCE, JULY 8-8, 1978 (FOSIGLE); 6 MONTHS 8475

CHEN, CHUAN FANG, TO SPEND ONE YEAR AT THE UNIVERSITY OF CAMBRIDGE, ENGLAND, TO DO RESEARCH ON THE PROBLEM OF STA-BILITY OF THERMOHALING CONVECTION IN A DENSITY-STRATIFIED FLUID . SEPTEMBER I, 1911 THROUGH AUGUST 41, 1918 (KOMO169): 12 MONTHS MAN

LAM, SAU-HAI; TO ATTEND. THE INTERNATIONAL SYMPOSIUM ON DYNAMICS OF IONIZED GASES, TOKYO, JAPAN, SEPTEMBER 18-18, 1871

(KO19449); 6 MONTHS \$500

SCANLAN, ROBERT H; TO ATTEND- THE THIRD INTERNATIONAL CONFERENCE ON WIND EFFECTS ON BUILDINGS AND STRUCTURES. TOKYO, JAPAN, SEPTEMBER 6-11, 1971 (KONO157): 6 MONTHS \$500

PETRIE. TED E: TO ATTEND. THE INTERNATIONAL CONFERENCE ON TOPOLOGY, OBERWOLFACH, GERMANY, SEPTEMBER 19-41, 1971 (POSO933); 12 MONTHS \$564

PETRYSHYN, W V; TO ATTEND CONFERENCE ON FUNCTIONAL ANALYSIS, OBERWOLFACH - GERMANY, OCTOBER 3-9, 1971 (POS0897); 18 MONTHS \$536

SIBNER, LESLEY N: TO ATTEND. SYMPOSIUM ON GLOBAL ANALYSIS. CONVENTRY, ENGLAND AND TRIESTE, ITALY, JUNE-AUGUST 1978 (POJ4788); 6 MONTHS \$697

GROT, RICHARD: TO ATTEND- NATO ADVANCED STUDY INSTITUTE ON FINITE BLEMENT METHODS IN CONTINUUM MECHANICS LISBON, PORTUGAL, SEPTEMBER 7-17, 1971 (ZOC2265); 6 MONTHS \$340

GELLER, MARGARET J; TO ATTEND- ADVANCED STUDY INSTITUTE ON HIGH ENERGY ASTROPHYSICS AND ITS RELATION TO ELEMENTA-RY PARTICLE PHYSICS AT BRICE, ITALY ON JUNE 10 - JULY 6. 1978 (2002558); 6 MONTHS \$428

ZUCKERMAN, GREGO J; ADV ST INST ON MODULAR FUNCTII VARIA-BLE&ARITH APPL ANTW BEL 1/17-8/8/78 (2008560): 6 MONTHS \$327

DEVORE, DAVID I; TO AFTEND- NATO ADVANCED STUDY INSTITUTE ON CHARGED AND CATALYTIC POLYMERS AT FORGES-LES-EAUX.

FRANCE ON JUNE 18-28, 1972 (2002577); 6 MONTHS \$642

CASWELL, VILLIAM E: TO ATTEND. NATO ADVANCED STUDY IN-STITUTE ON THEORETICAL PHYSICS - STRONG INTERACTIONS AT KAISERSLAUFERN, GERMANY, JULY 17-48, 1972 (Z002383); 6 MONTHS \$491 SOPER, DIVISON E; TO ATTEND- NATO ADVANCED STUDY IN-STITUTE ON HIGH-LIGHTS IN PARTICLE PHYSICS AT ERICE, ITALY, JULY 1-29, 19/2 (Z008585); 6 MONTHS \$418

AHLUWÁLIA, HARJIT 8; TO ATTEND- THE TWELFTH INTERNA-TIONAL CONFERENCE ON COSMIC RAYS (A030386); 6 MONTHS \$1,062

### **NEW YORK**

NINKOVICH, CHARLES D: TO COMPLETE EDITORIAL WORK ON THE ACTA OF THE INTERNATIONAL SCIENTIFIC CONGRESS ON THE VOL-CANO OF THERA, GREECE, SEPTEMBER 1969, VISIT ATHENS, AND THE AEGEAN ISLANDS, AUGUST 18, 1971 -SEPTEMBER 10, 1971 (A030751); 6 MONTHS \$442

BE, ALLAN W H; TRAVEL TO ATTEND- SCORIUNESCO WORKING GROUP ## SYMPOSIUM-WORKSHOP ON ZOOPLANKTON PRESERVATION, UNIVERSITY OF BATH, ENGLAND, JULY 18-19, 1978 (ACS1860); 6 MONTHS \$552

LITTLE, FRANK J JR; TRAVEL SUPPORT TO ATTEND- MEETING OF SOC. OF ENGINEERING SCIENCE, FIRST INTERNATIONAL MEETING POLLUTION. ENGINEERING AND SCIENTIFIC SOLUTIONS, TEL AVIV. ISRAEL JUNE 12-17, 1972 (A035915); 6 MONTHS \$1,086

MORSE, DAVID L; TRAVEL TO ATTEND. SECOND TROPICAL CON-FERENCE ON PULSED. HIGH-BETA PLASMAS, GAPCHING-BEI-MUNCHEN, WEST GERMANY, JULY 3-6, 1972 (Acsissi); 6 MONTHS \$719

KHAN, ANWAR A; TPAYEL TO THE UNIVERSITY OF LIEGE FOR RESEARCH, LIEGE, BELGIUM, OCTOBER 15, 1971 THROUGH APRIL 14, 1972 (BOSCISS); 2 MONTHS \$517

FOOTE, ROBERT H; TRAYEL TO ATTEND. SEVENTH WORLD CON-GRESS ON FERTILITY AND STERILITY, TOKYO AND KYOTO, JAPAN, CC-TOBER 16-25, 1971 (BOSOSSS); 6 MONTHS \$1,039

SHERMAN, FRED; TRAVEL TO ATTEND- BIOCHEM STRY OF GENE EXPRESSION IN HIGHER ORGANISMS, AUSTRALIA, MAY 1974 (BOSSES); 6 MONTHS \$800

AARONSON, SHELDON; TRAVEL TO ATTEND- SYMPOSIUM OF MODERN METHODS IN THE STUDY OF MICROBIAL ECOLOGY, UPP-SALA, SWEDEN, JUNE 18-23, 1972 (BO34692); 6 MONTHS \$400

BARR, CHARLES E; TRAVEL TO ATTEND. WORKSHOP ON ION TRANS-PORT IN PLANTS, ENGLAND, JULY 1972 (BOS 1726); 6 MONTHS \$411

SPANSWICK, ROGER M; TRAVEL TO ATTEND- WORKSHOP ON ION TRANSPORT IN PLANTS, ENGLAND, JULY 1972 (BOSIS17); 6 MONTHS \$610 MARSHAK, ROBERT E: TRAVEL SUPPORT TO ATTEND. MEETINGS OF THE CONTINUING COMMITTEE OF THE INTERNATIONAL FOUNDA-TION FOR SCIENCE, AND THE CONSTITUENT ASSEMBLY, PARIS, FRANCE, OCTOBER 18-21, 1971 (F030929); 6 MONTHS \$499

PALMER, ALLISON R; TRAVEL TO- EXAMINE THE CAMBRIAN STRATIGRAPHY OF THE MEDITERRANEAN LITTORAL, MAY 1-28, 1972

(FOJ 1499); 6 MONTHS \$435



BICHARDSON, ROBERT C: TRAVEL SUPPORT TO ATTEND. THE EU-ROPHYSICS STUDY CONFERENCE ON THERMOMETRY AND THERMAL CONTACT, ALBE', FRANCE, APRIL 11-11, 1970 (HOMESS); 6 MONTHS \$527

BHINOZUKA, MASANOBU; TRAVEL TO- VISIT AND MAKE SURVEY OF JAPANESE RESEARCH INSTITUTES CONCERNING EARTHQUAKES AND EXPLORE POSSIBILITY OF FUTURE U.S.JAPAN JOINT RESEARCH, JULY 1979 (101419): 6 MONTHS \$1,000

HERMAN, GABOR TI TRAVEL SUPPORT TO ATTEND- THE SEVENTH INTERNATIONAL MACHINE INTELLIGENCE WORKSHOP, EDINBURGH.

SCOTLAND, JUNE 8-10, 1979 (JONSOLS): 6 MONTHS \$628

STILLMAN, ALAN H: TRAVEL TO ATTEND TECHNICAL COMMITTEE ON COMPUTERS AND INFORMATION PROCESSING AND SURCOMNIT. TEE ON DATA COMMUNICATIONS, BERLIN, GERMANY, JUNE 12-10, 1072, TURIN, ITALY, JUNE 20-22, 1072 GOSSOON & MONTHS 2014

GROSCH, CHESTER E: VISIT READING UNIVERSITY, ENGLAND BY IN-VITATION OF PROFESSOR HOCKNEY, CHAIRMAN OF THE DEPART. MENT OF COMPUTER SCIENCE, JULY-SEPTEMBER 1012 (JOS4054); 6

MONTHS SEE

KU, WALTER H: TO ATTEND- 1971 EUROPEAN MICROWAVE CON-FERENCE -STOCKHOLM, SWEDEN - AUGUST 25-28, 1971 (KOMOSET); 6 MONTHS \$500

HESSEL, ALEXANDER: TO ATTEND- 1871 EUROPEAN MICROWAVE CONFERENCE-STOCKHOLM, SWEDEN-AUGUST \$1-48, 1071 (KOSO188): 6 MONTHS \$400

FELSEN, LEOPOLD B; TO ATTEND. THE INTERNATIONAL SYMPOSI-UM ON ELECTROMAGNETIC WAVE THEORY, TBILISI, USSR, SEP-TEMBER 9-18, 1971 (R0\$0391); 6 MONTHS \$600

CHENG, DAVID K: TO ATTEND- THE INTERNATIONAL SYMPOSIUM ON ANTENNAS AND PROPAGATION, SENDAL JAPAN SEPTEMBER 1-3. 1971 (ROJOS95); & MONTHS \$500

MARSHALL, THOMAS C: TO ATTEND. THE THIRD INTERNATIONAL CONFERENCE ON QUIESCENT PLASMA. ELSINORE, DENMARK, SEP-TEMBER 80-84, 1971 (KOJOHA); 6 MONTHS \$350

GHAUSI, MCHAMMED S; TO ATTEND- THE 1971 IEEE INTERNA-TIONAL SYMPOSIUM ON ELECTRICAL NETWORK THEORY, LONDON, ENGLAND. SEPTEMBER 6-10, 1971 (Kogo 443); 6 MONTHS \$200

SZENTIRMAI, GEORGE; TO ATTEND- THE 1971 IEEE INTERNATIONAL SYMPOSIUM ON ELECTRICAL NETWORK THEORY, LONDON, ENGLAND, SEPTEMBER 4-10, 1971 (KOJOLLY); 6 MONTHS \$200

SHINOZUKA, MASANOBU; TO ATTEND- THE THIRD INTERNATIONAL CONFERENCE ON WIND EFFECTS ON BUILDINGS AND STRUCTURES. TORYO, JAPAN, SEPTEMBER 6-11, 1971 (KO\$0160); 6 MONTHS \$500

8U. GOUQJEN: TO ATTEND. THE NINTH INTERNATIONAL CONGRESS ON GLASS, PARIS, FRANCE, SEPTEMBER 87 - OCTOBER 9, 1971 (KO30487); 6 MONTHS \$550

CASSEDY, EDWARD S JR; TO VISIT ATOMIC ENERGY LABORATORIES IWORKING ON LASER-PRODUCED PLASMAS), LONDON, ENGLAND AND ROME. ITALY. NOVEMBER 1971 (KOSO797); 6 MONTHS \$430

GROSS, ERIC T B; TRAVEL TO ATTEND- THE INTERNATIONAL SYM-POSIUM ON HIGH VOLTAGE TECHNOLOGY, MUNICH, GERMANY, MARCH 9-14, 1978 (KOS8185): 6 MONTHS 8341

GROB. DAVID: TRAVEL TO ATTEND. 1978 INTERNATIONAL CON-FERENCE ON MAGNETICS, KYOTO, JAPAN, APRIL 10-13, 1978 (KOSET42); 6 MONTHS \$820

WHITE, RICHARD N: TRAVEL TO ATTEND SYMPOSIUM ON MODEL ANALYSIS, SYDNEY, AUSTRALIA, MAY 16-18, 1978 (KOSETA); 6 MONTHS \$1,030

MATIJEVIC, EGON; TRAVEL TO ATTEND- SYMPOSIUM ON PARTICLE GROWTH IN SUSPENSIONS, LONDON, ENGLAND, APRIL 21-26, 1972 (Kaja744): 6 MONTHS 8504

SCHILLING, DONALD L; TRAVEL TO ATTEND POPOV SOCIETY MEET-ING, MOSCOW, USSR, MAY 1072 (KO32937); 6 MONTHS \$700

SHAW, DAVID T: TRAVEL TO ATTEND- THIRD INTERNATIONAL CON-FERENCE ON THERMIONIC ELECTRIC POWER GENERATION, JULICH, FEDERAL REPUBLIC OF GERMANY, JUNE 5-9, 1972 (KOSSSSO); 6 MONTHS

BENENSON, DAVID M; TRAVEL TO ATTEND- FIFTH ALL UNION CON-FERENCE ON LOW TEMPERATURE PLASMA GENE, NOVOSIBIRSK, U.S.S.R., JUNE 24-50, 1972 (KOSSSIG); 6 MONTHS \$710 GENERATORS,

BERGER, MELVYN S; TO ATTEND- A SUMMER SCHOOL ON SPECTRAL ANALYSIS OF NONLINEAR OPERATORS IN STIRIN, CZECHOSLOYAKIA. SEPTEMBER 14-17, 1971 (POJO158); 6 MONTHS \$563

WEST, JAMES E: TO ATTEND- THE THIRD PRAGUE SYMPOSIUM ON GENERAL TOPOLOGY, PRAGUE, CZECHOSLOVAKIA, AUGUST SO -SEP-TEMBER 8, 1971 (POJOSSI); 6 MONTHS \$630

JANZ, GEORGE J; TO VISIT UNIVERSITIES AND RESEARCH IN STITUTES TO DISCUSS RESEARCH IN ELECTROCHEMISTRY IN MOSCOW, KIEV AND LENINGRAD, U.S.R., NOVEMBER 1971 (PO10788); 6 MONTHS \$180

SUNDELIN, RONALD M: TO ATTEND. THE EIGHTH INTERNATIONAL CONFERENCE ON HIGH ENERGY ACCELERATORS, GENEVA, SWITZER-LAND, SEPTEMBER 20-24, 1871 (P030803); 12 MONTHS \$484

YON BORSTEL, ERNEST: TO ATTEND. THE EIGHTH INTERNATIONAL CONFERENCE ON HIGH ENERGY ACCELERATORS, GENEVA, SWITZER-LAND, SEPTEMBER 40-84, 1971 (POSOS16); 12 MONTHS \$648

FOSSAN, DAVID B: ONE YEAR SABBATICAL AT UNIVERSITY OF MU-NICH, GERMANY, AUGUST 46, 1971 - AUGUST 1, 1972 (POSOMA); 12 MONTHS

FLEISCHER, ROBERT L; TRAVEL EXPENSES FOR A SCIENTIFIC VISIT TO THE JOINT INSTITUTE FOR NUCLEAR RESEARCH, DUBNA, U.S.R., SEPTEMBER 21, 1971 - OCTOBER 2, 1971 (POS0025), 12 MONTHS

ACKERBERG, ROBERT C; TO SPEND A YEAR OF SABBATICAL LEAVE IN THE DEPARTMENT OF MATHEMATICS, UNIVERSITY COLLEGE, LONDON, ENGLAND, SEPTEMBER 1, 1971 THROUGH AUGUST 81. 1978 (PO10014); 18 MONTHS \$509

PRABHU, NARAHARI U; TO ATTEND. CONFERENCE ON STORAGE THEORY, GYOR, HUNGARY, SEPTEMBER 14-18, 1871 (POSOSS): 12 MONTHS

1206

KELLER, JOSEPH B; TO ATTEND. INTERNATIONAL SYMPOSIUM ON ELECTROMAGNETIC WAVE THEORY, TBILISI, USSR. SEPTEMBER 1-11. 1971 (P05095C): 1x MONTHS \$850

NANCOLLAS, GEORGE H; TO ATTEND. THIRD AUSTRALIAN BLEC. TROCHEMISTRY CONFERENCE, TERRIGAL, NEW SOUTH WALES, AUS-

TRALIA, FEBRUARY 16-18, 1978 (POSISSE); 6 MONTHS \$184 DIPRIMA, RICHARD C: TO CONDUCT RESEARCH AT IMPERIAL COL-

LEGE, LONDON, BNGLAND, JANUARY 21, 1972 - FEBRUARY 1, 1972 (POSIES); 6 MONTHS 8444

BRUCKENSTEIN, STANLEY; TRAVEL TO ATTEND- THE INTERNA-TIONAL CONGRESS OF ANALYTICAL CHEMISTRY, KYOTO, JAPAN, APRIL 3-7, 1978 (POISSSE); 6 MONTHS \$965 MORRISON, GEORGE H; TO ATTEND- THE INTERNATIONAL CON-

GRESS OF ANALYTICAL CHEMISTRY, KYOTO, JAPAN, APRIL 4-7, 1974 (POJSSIS); 6 MONTHS \$1,046

BOROWITZ, IRVING J; TRAVEL TO ZURICH, SWITZERLAND TO SPEND SABBATICAL SUMMER IN RESEARCH AT EIGGENOSSISCHE TECHNISCHE HOCHSCHULE (ETH), MAY-JULY, 1878 (POSSIOT): 6 MONTHS

CHASE, STEPHEN U; TO ATTEND CONFERENCE ON RINGS, MODULES AND HOMOLOGICAL METHODS OBERWOLFACH GERMANY. APRIL SOMAY 6. 1878 (POSSIST): 6 MONTHS 5382

OWEN, TOBIAS, TRAVEL TO ATTEND. SYMPOSIUM ON THE ORIGIN OF THE SOLAR SYSTEM, NICE, FRANCE, APRIL 8-8, 1972 (POSSES); 6 MONTHS \$562

ROSEN, ROBERT: TO- COLLABORATE WITH SOVIET SCIENTISTS AT THE UNIVERSITIES IN MOSCOW, LENINGRAD AND NOVOSIBIRSK CON-CERNING APPLICATION OF MATHEMATICAL TECHNIQUES TO BIOLOG-ICA' SYSTEMS DURING APRIL 1978 (POSSSIT); 6 MONTHS \$600

RAMIREZ, FAUSTO: TRAVEL TO ATTEND- FIFTH ALL UNION OR-GANOPHOSPHORUS CONFERENCE, MOSCOW, USSR, JUNE 26-50, 1870 (Pat ;444); 6 MONTHS \$918

KERKER, MILTON; TRAVEL TO- INTERNATIONAL CONFERENCE CHEMISTRY AT INTERPACES', JUNE 07-JULY 8, 1978, ROVINJ, YU-GOSLAVIA (Postele); 6 MONTHS \$748

TURRO, NICHOLAS J; TRAVEL TO- FOURTH INTERNATIONAL SYM-POSIUM ON ORGANIC PHOTOCHEMISTRY, BADEN-BADEN, GERMANY, JULY 16-28, 1978 (POS 1703); 6 MONTHS \$589

PADWA, ALBERT; TRAVEL TO- FOURTH INTERNATIONAL SYMPOSI-UM ON PHOTOCHEMISTRY, BADEN-BADEN, GERMANY, JULY 16-88, 1978 (PO\$1705): 6 MONTHS \$550

RITCHIE, CALVIN D; TRAVEL TO- FIRST IUPAC CONFERENCE ON PHYSICAL ORGANIC CHEMISTRY, CRANS SUR SIERRE, SWITZERLAND, SEPTEMBER 4-8, 1971 (POLITIE); 6 MONTHS \$560

ZUMAN, PETR, TRAVEL TO- FIRST IUPAC CONFERENCE ON PHYSI-CAL ORGANIC CHEMISTRY. CRANS SUR SIERRE, SWITZERLAND, SEP-TEMBER 4-8, 1978 (POS 1889): 6 MONTHS \$515

LICHTENBAUM, STEPHEN: TO ATTEND- ANNUAL RESEARCH CON-FERENCE IN ALGEBRA, BONN, GERMANY, JUNE 0-16. 1072 (POJULI); 6 MONTHS \$700

CONDRATE, ROBERT A SR; TRAVEL TO ATTEND- THIRD INTERNA-TIONAL CONFERENCE ON RAMAN SPECTROSCOPY, REIMS, FRANCE, SEPTEMBER 8-13, 1970 (POSISIO); 6 MONTHS \$534

BAZER, JACK; TO ATTEND- NATO ADVANCED STUDY INSTITUTE ON MAGNETOHYDRODYNAMIC PHENOMENA IN ROTATING FLUIDS, CAM-BRIDGE, ENGLAND, JUNE 25 - JULY 1, 1872 (POSISSE); 5 MONTHS \$590

MCNULTY, PETER J; TRAVEL TO ATTEND- EIGHTH INTERNATIONAL CONFERENCE ON NUCLEAR PHOTOGRAPHY AND SOLID STATE TRACK DETECTORS, BUCHAREST, RUMANIA, JULY 10-15, 1072 (POSSOIS): 12 **MONTHS \$700** 

GLASER, WILLIAM A; TO ATTEND- CONFERENCE ON CROSS NA-TIONAL SURVEY RESEARCH, BUDAPEST, HUNGARY, JULY 21-48, 1972 (SO\$\$\$18): 12 MONTHS \$690

GROSS, FELIKS; TO ATTEND- 'INTERNATIONAL CONFERENCE ON PROBLEMS AND PERSPECTIVES OF BORDER REGIONS, GORIEIA, ITA-

LY, MARCH 81-87, 1978 (SOJ199): 12 MONTHS \$659

HAYES, DENNIS E; TRAVEL TO ATTEND-THE INTERNATIONAL SYMPOSIUM ON THE OCEANOGRAPHY OF THE SOUTH PACIFIC, WELLING-TON, NEW ZEALAND, FEBRUARY 9-15, 1972 (VOSE177); 6 MONTHS \$1,506

GORDON, ARNOLD L: TRAVEL TO ATTEND THE INTERNATIONAL SYMPOSIUM ON THE OCEANOGRAPHY OF THE SOUTH PACIFIC, WELLINGTON, NEW ZEALAND, FEBRUARY 9-15, 1978 (VOSE178); 6 MONTHS \$620



DALZIEL, IAN W D; TRAVEL TO ATTEND- NATO ADVANCED STUDY INSTITUTE, UNIVERSITY OF NEWCASTLE UPON TYNE, ENGLAND. APRIL 10-14, 1978 (VOISTES); 6 MONTHS \$311

EUTCHER, GERALD J. TO ATTEND- NATO ADVANCED STUDY IN-STITUTE ON INTERACTION OF ENERGETIC CHARGED PARTICLES WITH SOLIDS, ISTANBUL, TURKEY, AUGUST 18-48, 1871 (2002181); 6 MONTHS MITS

DUAX, WILLIAM L; TO ATTEND- NATO ADVANCED STUDY INSTITUTE ON DIRECT AND PATTERSON METHODS OF SOLVING CRYSTAL STRUC-TURES, YORK, ENGLAND, SEPTEMBER 6-18, 1971 (Z004148); 6 MONTHS \$360

BARRY, B AUSTIN; THIRTEENTH INTERNATIONAL CONGRESS OF SURVEYORS WIESBADEN GERMANY (ZOOMS); 6 MONTHS \$436

DAVIS, ROBERT B: AND INTERNATE CONGRESS ON MATHEMATICAL EDUC EXETER ENGLAND 8/99-9/9/76 (Z004548); 6 MONTHS \$461

SCHARLEMANN, ERNST T; ASI ON HIGH EN ASTROPHYS&ITS REL TO SLEM PART ERICE IT ejie-t/ejte (Zoossa); 6 MONTHS \$484

MILLETT, CLARKE TI ASI ON MOLECUACELLU ASPECTSIMMUNOL CARRY-LE ROUET FRANCE \$11-10/78 (ZODESSS); 6 MONTHS \$319

SPITAL, ROBIN; TO ATTEND- NATO ADVANCED STUDY INSTITUTE ON ELECTROMAGNETIC INTERACTIONS OF ELEMENTARY SYSTEMS

AT CARGESE, FRANCE ON JULY 4-19, 1978 (2004)79); 6 MONTHS 8360
CESARIO, FRANK J; TO ATTEND. NATO ADVANCED STUDY INSTITUTE ON RECENT DEVELOPMENTS 'IN REGIONAL SCIENCE AT KARLSRUHE, GERMANY, JULY 94, AUGUST 11, 1978 (2008587); 6 MONTHS \$420

ROSS, FRED K; TO ATTEND- NATO ADVANCED STUDY INSTITUTE ON EXPERIMENTAL ASPECTS OF X-RAY AND NEUTRON SINGLE CRYSTALL DIFFRACTION METHODS AT AARHUS, DENMARK JULY 31 AUGUST 11, 1978 (Z008589); 6 MONTHS 8621

LEVIN, DAVID N; TO ATTEND- NATO ADVANCED STUDY INSTITUTE ON HIGH-LIGHTS IN PARTICLE PHYSICS AT ERICE, ITALY, JULY 7-49, 1978 (2004599); 6 MONTHS \$443

WILLIAMS, HUGH H; TO ATTEND. NATO ADVANCED STUDY IN-STITUTE ON HIGH-LIGHTS IN PARTICLE PHYSICS AT ERICE, ITALY, JULY 7-49, 1978 (Zoozsoz): 6 MONTHS \$433

### STATE UNIVERSITY AT STONY BROOK

NEUBERGER, EGON; TRAVEL OF AMERICAN ECONOMISTS TO ATTEND- THE CONFERENCE ON GRANTS AND EXCHANGE IN AN UR-BANIZED SOCIETY, AUGSBURO, BAVARIA, AUGUST 91-44, 1978 (SOIJISI); 12 MONTHS \$1,880

### YESHIVA UNIVERSITY-ALBERT BINSTEIN COLLEGE OF MEDICINE

AUGUST, J THOMAS; TRAVEL TO ATTEND- SYMPOSIUM ON PROTEIN SYNTHESIS AND NUCLEIC ACIDS, LAPLATA, ARGENTINA, NOVEMBER 48, THROUGH DECEMBER 3, 1971. (BOJO665): 12 MONTHS \$2,000

### NORTH CARGUNA

HOMMERSAND, MAX H; TO ATTEND- SEVENTH INTERNATIONAL SEAWEED SYMPOSIUM, SAPPORO, JAPAN, AUGUST 8-19, 1971 (A050141); 6 MONTHS \$1.025

TEXTORIS, DANIEL ANDREW; TO ATTEND- EIGHTH INTERNATIONAL SEDIMENTOLOGICAL CONGRESS, 1911, HEIDELBERG, WEST GERMANY, AUGUST 30 - SEPTEMBER 4, 1871 (ADJOSES); 6 MONTHS 1496

LYMAN, JOHN; TRAVEL TO ATTEND- SECOND INTERNATIONAL CON-GRESS ON THE HISTORY OF OCEANOGRAPHY, EDINBURGH, SCOT-LAND, SEPTEMBER 19-10, 1972 (AGJ1956); 6 MONTHS 4485 VANDENBERGH, JOHN G; TRAVEL SUPPORT TO ATTEND-THIRD IN-

TERNATIONAL SYMPOSIUM ON COMPARATIVE REPRODUCTION, UNITED KINGDOM, MARCH 1978 (BO32588): 6 MONTHS \$392

BERGERON, JAN A; TRAVEL TO ATTEND- SEMINAR ON PROSIMIAN BIOLOGY, ENGLAND, APRIL 1972 (BOSJ912); 6 MONTHS \$532

CALINGAERT, PETER: VISIT TO THE U.S.R. AS A GUEST OF THE SOVIET ACADEMY OF SCIENCES, MAY 1978 (JOSJOIS); 6 MONTHS \$638

VESIC, ALEKSANDAR S; TO SPEND SABBATICAL LEAVE AT CAM-BRIDGE UNIVERSITY, ENGLAND, DECEMBER 15, 1971 THROUGH JUNE 15, 1979 (KOS1187), 18 MONTHS \$250

BEATTY, KENNETH O JR; TRAVEL TO ATTEND. ASSEMBLY FOR IN-TERNATIONAL HEAT TRANSFER CONFERENCES AND THE FOURTH ALL UNION HEAT AND WASS TRANSFER CONFERENCE, MINSK, USSR. MAY 13-80, 1979 (KOSETET): 6 MONTHS \$300

BUCK, RICHARD P. TO ATTEND TWENTY-SECOND INTERNATIONAL COMMITTEE COMMITTEE OF THERMODYNAMIC AND ELECTROCHEMI-CAL (C.I.T.C.E.), DUBROVNIK, YUGOSLAVIA, SEPTEMBER 19-SEP-TEMBER 19-25, 1971 (Posoist); 6 Months \$500

CLOUGH, G WAYNE; TO ATTEND NATO ADVANCED STUDY IN-TITUTE ON FINITE ELEMENT METHODS IN CONTINUUM STITUTE MECHANICS, LISBON, PORTUGAL, SEPTEMBER 7-17, 1971 (Z002439); 6

MONTHS MOT

### NORTH DAKOTA

SOONPAA, HENN H; TRAVEL TO ATTEND- INTERNATIONAL CON-FERENCE ON THIN FILM PHYSICS, VENICE, ITALY, MAY 15-19, 1972 (HOS 4888); 6 MONTHS \$283

CLARK, TOWNY DEAN; TO ATTEND- NATO ADVANCED STUDY IN-STITUTE ON FROHLICH POLARONS, ANTWERP, BELGIUM, AUGUST 16-\$9, 1971 (2008458); 6 MONTHS \$578

RUDNEY, HARRY, TRAVEL TO ATTEND GOLDEN JUBILEE OF THE INDIAN INSTITUTE OF SCIENCE, BANGALORE, INDIA, DECEMBER 44. 1971 (BOILING): 6 MONTHS \$987

SCOTT, ROY A III; TRAVEL TO ATTEND- SYMPOSIUM ON CONFORMA. TION OF BIOLOGICAL POLYMERS, ISRAEL, APRIL 1972 (BOSSILS); 6 MONTHS MAN

GOTTLIEB, DAVID, CONFERENCE OF THE SOCIETY OF APPLIED BACTERIOLOGY, LOUGHBOROUGH, ENGLAND, JULY 10-19, 1978 (BOSITES); 8 MONTHS \$684

STRNAT, KARL J; TRAVEL TO ATTEND- 1972 INTERNATIONAL CON-FERENCE ON MAGNETICS, KYOTO, JAPAN, APRIL 10-18, 1978 (HOSSON); 6 MONTHS \$602

LANDO, JEROME B; TRAVEL TO ATTEND. THIRD INTERNATIONAL SYMPOSIUM ON CHEMISTRY OF THE ORGANIC SOLID STATE, GLASCOW, SCOTLAND, SEPTEMBER 18-28, 1919 (HOSILES); 6 MONTHS \$488

HIBBELER, RUSSEL C; TO ATTEND- FIRST INTERNATIONAL CON-FERENCE ON STRUCTURAL MECHANICS IN REACTOR TECHNOLOGY BERLIN, GERMANY - SEPTEMBER 10-04, 1971 (KOSOSES); 6 MONTHS \$210

WEED, HERMAN R; TO ATTEND. NINTH INTERNATIONAL CON-FERENCE ON MEDICAL AND BIOLOGICAL ENGINEERING-MEL-BOURNE, AUSTRALIA - AUGUST 25-27, 1971 (KO90265); 6 MONTHS \$700

OJALVO, MORRIS: TO ATTEND- INTERNATIONAL SYMPOSIUM ON EX-PERIMENTAL ANALYSIS OF INSTABILITY PROBLEMS ON REDUCED AND FULL SCALE MODELS - EVENOS AIRES, ARGENTINA SEP-TEMBER 13-13, 1971 (KO30301); & MONTHS \$572

GOBLE, GEORGE G; TO ATTEND. THE MEETING ON MASS PRODUCED STEEL STRUCTURES, PRAQUE, CZECHOSLOVAKIA, SEPTEMBER 21-24, 1971 (KO30464): 6 MONTHS \$460

KEENAN, PHILIP C; TO AFTEND- THE IAU. SYMPOSIUM ON SPEC-TRAL CLASSIFICATION AND MULTICOLOR PHOTOMETRY, CORDOBA ARGENTINA, OCTOBER 18-24, 1971 (POSO913); 6 MONTHS \$771

PARSONS, SIDNEY B; TO ATTEND. THE THIRD TRIESTE COLLOQUI. UM ON ASTROPHYSICS 'SUPERGIANT STARS,' TRIESTE, ITALY, SEP-TEMBER 6-8, 1971 (POSO984); 6 MONTHS \$464

AHLSWEDE, RUDOLF, TO ATTEND- THE SIXTH PRAGUE CON-FERENCE ON INFORMATION THEORY, STATISTICAL DECISION FUNC-TIONS, AND RANDOM PROCESSES, PRAGUE, CEECHOSLOVAKIA, SEP-TEMBER 18-95, 1971 (POJO938); 6 MONTHS \$749

YEAGER, ERNEST B; TO ATTEND- THIRD AUSTRALIAN ELEC-TROCHEMISTRY CONFERENCE, TERRIGAL, NEW SOUTH WALES, AUS-TRALIA, FEBRUARY 18-18, 1972 (POS1883); 6 MONTHS \$1,001

MARK, HARRY B JR: TO ATTEND. THE INTERNATIONAL CONGRESS ON ANALYTICAL CHEMISTRY, KYOTO, JAPAN, APRIL 2-7, 1972 (POSESSO); 6 MONTHS 1964

ORCHIN, MILTON; TRAVEL TO ATTEND- SYMPOSIUM ON CHEMISTRY OF HYDROFORMYLATION AND RELATED REACTIONS, VESZPREM. HUNGARY, MAY \$1 - JUNE \$, 1978 (POSE756); 6 MONTHS \$597

DELSEMME, A H; TRAVEL TO ATTEND- COLLOQUIUM NO. 92 OF THE INTERNATIONAL ASTRONOMICAL UNION, NICE, FRANCE, APRIL 4-7, 1974 (P033283); 6 MONTHS 2615

CAPRIOTTI, EUGENE R; TRAVEL TO ATTEND- EIGHTEENTH INTER-NATIONAL ASTROPHYSICAL SYMPOSIUM, LIEGE, BELGIUM, JUNE 26-\$7, 1972 (PO\$4586); 6 MONTHS \$532

ASTON, JOHN G; TRAVEL TO ATTEND- THIRD EUROPEAN CON-FERENCE ON THERMAL PHYSICAL PROPERTIES OF SOLIDS AT HIGH TEMPERATURES, TURIN, ITALY, JUNE 19-45, 1972 (POSIGIA); 6 MONTHS

KENNEDY, JOSEPH P; TRAVEL TO-INTERNATIONAL SYMPOSIUM ON MACROMOLECULES, HELSINKI, FINLAND, JULY 8-8, 1978 (POS4685); 6 MONTHS #616

RAO, K NARAHARI; TRAVEL TO ATTEND- (1) SECOND INTERNA-TIONAL SEMINAR ON HIGH RESOLUTION INFRARED SPECTROSCOPY. SEPTEMBER 4-8, 1972 PRAGUE, CZECHOSLOVAKIA (1) SYMPOSIUM ON HIGH RESOLUTION MOLECULAR SPECTROSCOPY, SEPTEMBER 10-15, 1978 NOVOSIBIRSK, USSR (POS 1981); 6 MONTHS \$783

VARGA, RICHARD S; TO- CONSULT WITH SCIENTISTS ON THE NU-MERICAL SOLUTION OF ELLIPTIC AND PARABOLIC PARTIAL DIF-FERENTIAL EQUATIONS, IN NOVOSIBIRSK, U.S.R., JUNE 17 - JULY 4, 1978 (POS 1987); 6 MONTHS \$700

JANKO, ZVONIMIR; TO ATTEND- THE WARWICK GROUP THEORY SYMPOSIUM, WARWICK, ENGLAND, OCTOBER 1 - DECEMBER 41, 1972 (PO\$4959): 6 MONTHS \$567

SCHOPP, JAMES M. TRAYEL TO ATTEND NATO ADVANCED STUDY INSTITUTE. UNIVERSITY OF NEWCASTLE UPON TYNE. ENGLAND,

APRIL 10-14, 1978 (VOSS750); 6 MONTHS \$591

STUMP, EDMUND: TRAVEL TO- REPUBLIC OF SOUTH AFRICA TO CONFER WITH SPECIALISTS AND VISIT CRITICAL LOCALITIES FOR COMPARISON WITH ANTARCTIC MATERIALS, SEPTEMBER 1972 (Vosster); 12 MONTHS \$1,430



MERCER, JOHN H; TRAVEL TO ATTEND- SECOND CONFERENCE ON QUATERNÁRY STUDIES OF THE ANTARCTIC REGION, CANBERRA, AUSTRALIA, AUGUST 7-9, 1874 (VOJ.891); 6 MONTHS \$1,111

WAGNER, THOMAS E; TO ATTEND. NATO ADVANCED STUDY IN-STITUTE ON FUNDAMENTAL ASPECTS AND RECENT DEVELOPMENTS IN OPTICAL ROTATORY DISPERSION AND CIRCULAR DICHROISM, TIR-RENIA, ITALY, SEPTEMBER 6-18, 1971 (Z008468); 6 MONTHS \$497

CLINE, MORRIS G; A ST I MOD ASPECTS/HORM REG IN PLANT GROWTH &DEV IZMIR TURKS/80-0/1/1 (2002266); 6 MONTHS \$636

STUMP, EDMUND, ASI ON CONT DRIFT SEA-FLR SPREAD&PLATE TECT IMPLIC FOR E-SCI 4/10-14/72 (Z002527); 6 MONTHS \$567

NAINIS, W SCOTT; ASI ON DECOMP AS A TOOL F SOLVING LARGE SCALE PROB CAMB ENG 7/17-26/78 (2008573); 6 NONTHS \$461

#### **OKLAHOMA**

WEINHEIMER, ALFRED J; TRAVEL TO ATTEND. THE EIGHTH INTER-NATIONAL SYMPOSIUM ON THE CHEMISTRY OF NATURAL PRODUCTS, INDIA, FEBRUARY 1974 (BOJA199); 6 MONTHS \$1,399

PISHKIN, YLADIMIR: TRAVEL TO- ACCEPT INVITATION BY SOVIET NATIONAL COMMITTEE, IBP TO VISIT USSR SCIENCE INSTITUTES AND CONFER WITH THEIR LEADING SCIENTISTS, SEPTEMBER-OC-TOBER 1974 (VOJE736); 6 MONTHS \$1,000

SHURLEY, JAY T; TRAVEL TO- ACCEPT INVITATION BY SOVIET NA-TIONAL COMMITTEE, IBP TO VISIT USSR SCIENCE INSTITUTES AND CONFER WITH THEIR LEADING SCIENTISTS, SEPTEMBER OCTOBER

1974 (VOJJ101); 6 MONTHS \$1,000

MUCHMORE, HAROLD G; TRAVEL SUPPORT TO ATTEND-SYMPOSIUM ON HUMAN BIOLOGY AND MEDICINE IN THE ANTARCTIC, CAM-BRIDGE, ENGLAND, SEPTEMBER 19-81, 1978 (VGJ3189): 6 MONTHS \$632

BLACKBURN, ARCHIE B; TRAVEL TO ATTEND- SYMPOSIUM ON HUMAN BIOLOGY AND MEDICINE IN THE ANTARCTIC, CAMBRIDGE, ENGLAND, SEPTEMBER 19-41, 1972 (VOJJ190); 6 MONTHS \$632

NATANI, KIRMACH; TRAVEL TO ATTEND- SYMPOSIUM ON HUMAN BIOLOGY AND MEDICINE IN THE ANTARCTIC, CAMBRIDGE, ENGLAND, SEPTEMBER 16-41, 1974 (VOSS191); 6 MONTHS \$632

#### OREGON

KOMAR, PAUL DOUGLAS; TO ATTEND. EIGHTH INTERNATIONAL SEDIMENTOLOGICAL CONGRESS, HEIDELBERG, GERMANY, AUGUST 30 -SEPTEMBER 10, 1871 (AGJ0140); 6 MONTHS \$757

HEDGPETH, JOEL W. TRAVEL TO ATTEND. MEETING ON HISTORY OF OCEANOGRAPHY, EDINBURGH, SCOTLAND, AND INTERNATIONAL HELGOLAND SYMPOSIUM, WEST GERMANY, SEPTEMBER 8-41, 1911 (ADJOLE): 6 MONTHS \$825

HODGSON, ROBERT T; TRAVEL TO ATTEND MEETING OF THE SCIENTIFIC COMMISSION OF PHYSICAL OCEANOGRAPHY OF IAPSO ON OPTICAL ASPECTS OF OCEANOGRAPHY, COPENHAGEN, DENMARK, JUNE 19-23, 1972 (A033255); 6 MONTHS 8885

GRAY, JANE; TO ATTEND: THE SILVER JUBILEE OF THE BIRBAL SAHNI INSTITUTE OF PALEOBOTANY, LUCKNOW, INDIA, DECEMBER 5-

11, 1971 (BOJ1838): 6 MONTHS \$393

FRYKLUND, JAMES W; TO ATTEND. NATO ADVANCED STUDY IN-STITUTE ON MICROPROGRAMMING, ST. RAPHAEL, FRANCE, AUGUST 30 -SEPTEMBER 10, 1971 (2002/38); 6 MONTHS \$620

HOLDEN, JOHN P. TO ATTEND- NATO ADVANCED STUDY INSTITUTE ON THEORETICAL PHYSICS - STRONG INTERACTIONS AT KAISER-SLAUTERN, GERMANY, JULY 17-28, 1972 (Z002582); 6 MONTHS \$472

SPACKMAN, WILLIAM; TO ATTEND- THE INTERNATIONAL COMMIT-TEE FOR COAL PETROLOGY, KREFELD, GERMANY, AUGUST 20-28, 1971 (A030532); 6 MONTHS \$701

BURSTYN, HAROLD L; TRAVEL SUPPORT TO ATTEND- SECOND IN-TERNATIONAL CONGRESS OF THE HISTORY OF OCEANOGRAPHY, EDINBURGH, SCOTLAND, SEPTEMBER 12-20, 1972 (A033784); 6 MONTHS

FEINGOLD, DAVID S; TO ATTEND. THE SYMPOSIUM ON THE BIOCHEMISTRY OF GLYCOSIDIC LINKAGES, SAN CARLOS BARILOCHE, ARGENTINA, NOVEMBER 8-11, 1971 (BGJ1524); 6 MONTHS \$631

BELTON, GEOFFREY R; TRAVEL TO ATTEND. THIRD AUSTRALIAN ELECTROCHEMISTRY CON' RENCE, TERRIGAL, NEW SOUTH WALES, AUSTRALIA, FEBRUARY 16-18, 1878 (HOSZIFI); 6 MONTHS \$400

FISCHER, JOHN E; TRAVEL TO ATTEND- INTERNATIONAL CON-FERENCES- (1) BAND STRUCTURE IN SOLIDS, GREAT GREAT BRITAIN, (4) DEFECTS IN SEMICONDUCTORS, GREAT BRITAIN AND (4) PHYSICS OF SEMICONDUCTORS, WARSAW, POLAND, JULY 3-29, 1972 (HOSSOIT); 6 MONTHS \$381

EASTMAN, CHARLES W: TRAVEL TO ATTEND. SECOND INTERNA-TIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE, LONDON, EN-

GLAND, SEPTEMBER 1-3, 1971 (JOJ0280): 6 MONTHS \$350

HARRIS. DEVERLE P: TO ATTEND. THE TENTH INTERNATIONAL SYMPOSIUM ON THE APPLICATION OF COMPUTER METHODS IN THE MINERAL INDUSTRY, JOHANNESBURG, SOUTH AFRICA, APRIL 9-14, 1872 (JOSS 279); 6 MONTHS \$100

ERDOGAN, FAZIL: TO ATTEND- FIRST INTERNATIONAL CON-FERENCE ON STRUCTURAL MECHANICS IN REACTOR TECHNOLOGY BERLIN, GERMANY - SEPTEMBER 80-84, 1971 (KOJOR68); 8 MONTHS \$300 FROMM, ELI; TO ATTEND. NINTH INTERNATIONAL CONFERENCE

ON MEDICAL AND BIOLOGICAL ENGINEERING-MELBOURNE, AUS-TRALIA - AUGUST 43-87, 1971 (KOJOR44); 6 MONTHS \$810

SHERMAN, ZACHARY; TO ATTEND. THE TWENTY-SECOND CONGRESS OF THE INTERNATIONAL ASTRONAUTICAL FEDERATION, BRUSSELS, BELGIUM, SEPTEMBER 20-25, 1971 (KOJOMS); 6 MONTHS \$410

SHORE, SIDNEY: TO ATTEND- THE INTERNATIONAL ASSOCIATION OF SHELL STRUCTURES SYMPOSIUM, TOKYO, JAPAN, OCTOBER 17-43, 1971 (KOJO441): 6 MONTHS \$450

GEORGE, WILLIAM K JR; TRAVEL SUPPORT TO ATTEND-THE CON-FERENCE ON FLUID DYNAMIC MEASUREMENTS, LEICESTER, EN-GLAND, APRIL 18-14, 1972 (KO18485); 6 MONTHS \$438

ABRAMS, JOEL 1; TRAVEL SUPPORT TO ATTEND: THE NINETH CON-GRESS OF THE INTERNATIONAL ASSOCIATION FOR BRIDGE & STRUC-TURAL ENGINEERING, AMSTERDAM, NETHERLANDS, MAY 8-13, 1978. (K032602): 6 MONTHS \$400

WHALEY, RANDAL M; TO ATTEND- THE TWENTY-FIFTH CONGRESS OF INTERNATIONAL SCIENTIFIC FILM ASSOCIATION, KIEV, U.S.S.R., SEPTEMBER #1-#9, 1971 (NOJ1#45); 6 MONTHS #813

ZETTLEMOYER, ALBERT C; TO ATTEND. FARADAY SOCIET: DISCUS-SIONS 'SURFACE CHEMISTRY OF OXIDES,' LONDON, ENGLAND, SEP-TEMBER 13-15, 1971 (PGJ0159); 6 MONTHS \$41

HEICKLEN, JULIAN P, TO ATTEND TENTH INTERNATIONAL SYMPOSIUM ON FREE RADICALS, LYON, FRANCE, AUGUST \$1 - SEPTEMBER \$, 1971 SIXTH INTERNATIONAL CONFERENCE ON PHOTOCHEMISTRY, BORDEAUX, FRANCE, SEPTEMBER 6-8, 1971 (Pajores); 6 MONTHS \$563

KISSLINGER, LEONARD S, TO ATTEND- THE FOURTH INTERNA-TIONAL CONFERENCE ON HIGH ENERGY PHYSICS AND NUCLEAR STRUCTURE, DUBNA, U.S.S.R., SEPTEMBER 7-11, 1871 (POJOISE); 6 MONTHS \$940

GERLUOY, EDWARD: TRAVEL TO VISIT SOVIET ACADEMY OF SCIENCES, MAY 1972 (POJ2933); 6 MONTHS \$489

ARNETT, EDWARD M: TRAVEL TO- FIRST CONFERENCE ON PHYSI-CAL ORGANIC CHEMISTRY, CRANS SUR SIERRE, SWITZERLAND, SEP-TEMBER 4-8, 1972 (POJ1971): 6 MONTHS \$538

POLICE, JOHN A: TRAVEL TO- FIRST JUPAC CONFERENCE ON PHYSI-CAL ORGANIC CHEMISTRY, CRANS SUR SIERRE, SWITZERLAND, SEP-TEMBER 1-8, 1972 (POJ1827); 6 MONTHS \$548

BERNHEIM, ROBERT A: TRAVEL TO: INTERNATIONAL CONFERENCE ON MOLECULAR SPECTROSCOPY, WROCAW, POLAND, SEPTEMBER 18-19, 1972 (POS4845); 6 MONTHS \$714

KAY, JACK G, TRAYEL TO- INTERNATIONAL CONFERENCE ON MOLECULAR SPECTROSCOPY, WROCAW, POLAND, SEPTEMBER 15-18, 1972 (POSISIT); 6 MONTHS \$670

STEELE, WILLIAM A; TRAVEL TO ATTEND. THIRD INTERNATIONAL CONFERENCE ON RAMAN SPECTROSCOPY, REIMS, FRANCE, SEP-TEMBER 8-14, 1972 (POS4848); 6 MONTHS \$520

ACKOFF, RUSSELL L; 4TH INTERNAT CONF ON OPERATIONS RESEARCH DUBLIN IRELAND 8/41-25/72 (2002544); 6 MONTHS \$630 OMALLEY, THOMAS: ASI ON FACIAL STRUCKOMPACT CONVEX

SETS&APPLICA SWANSE 4 ENO 7/2-15/4 (Z002572); 6 MONTHS \$475

BERMAN, HELEN M; TO ATTEND- NATO ADVANCED STUDY IN-STITUTE ON EXPERIMENTAL ASPECTS OF X-RAY AND NEUTRON SIN-GLE CRYSTAL DIFFRACTION METHODS AT AARHUS, DENMARK, JULY #1 - AUGUST 11, 1972 (Z002591); 6 MONTHS \$490

### LEHIGH UNIVERSITY

HILLMAN, DONALD J; TO ATTEND- THE JERUSALEM CONFERENCE ON INFORMATION TECHNOLOGY, JERUSALEM ISRAEL, AUGUST 14-20, 1971 (NO30559); 6 MONTHS \$1,012

### **RHOOE ISLAND**

KRAUSE, DALE C; TO ATTEND. THE FIFTEENTH GENERAL AS-SEMBLY OF INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS, MOSCOW, U.S.S.R., AUGUST 2-14, 1871 (A030389); 6 MONTHS \$450

KRAUSE, DALE C; TRAVEL TO ATTEND- THE INTERNATIONAL SYM-POSIUM ON THE OCEANOGPAPHY OF THE SOUTH PACIFIC, WELLING-TON, NEW ZEALAND, FEBRUARY 0-15, 1972 (AGENIS), 6 MONTHS \$500

HARGRAYES, PAUL E; TRAVEL SUPPORT TO ATTEND SECOND SYM-POSIUM ON RECENT AND FOSSIL MARINE DIATOMS, LONDON, EN-GLAND, SEPTEMBER 4-9, 1972 (A033041); 6 MONTHS \$445

GLICKSMAN, MAURICE; CONFERENCE ON PLASMA THEORY, KIEV,

USSR, OCTOBER 19-23, 1971 (POS1265); 12 MONTHS \$576
WOLD, AARON; TRAVEL TO VISIT- UNIVERSITIES OF BORDEAUX
AND PARIS, TO DISCUSS COLLABORATIVE RESEARCH PROGRAMS, JUNE 16-22, 1972 (POJ1624); 6 MONTHS \$652

WARD, HAROLD R; TRAVEL TO ATTEND- SYMPOSIUM ON CHEMI-CALLY INDUCED DYNAMIC POLARIZATION OF NUCLEI, TALLINN, ESTONIAN S.S.R., AUGUST 13-16, 1972 (POJ1791); 6 MONTHS \$850

SPRAGUE, LUCIAN M: TO ATTEND. THE SEVENTH SESSION OF THE INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION. PARIS. FRANCE, OCTOBER 26 - NOVEMBER 8, 1971 (X051551); 6 MONTHS \$932



### SOUTH CAROUNA

FERM. JOHN C: TO ATTEND. THE INTERNATIONAL CONGRESS FOR STRATIGRAPHY AND GEOLOGY OF THE CARBONIFEROUS, KREFELD. GERMANY, AUGUST \$1-48, 1971 (A030317), 6 MONTHS \$603

HULBERT, BANUEL F: TRAVEL TO ATTEND, CONFERENCE ON MATERIALS. PROSTHESES AND AIDS TO THE HANDICAPPED, LIVER-

POOL, ENGLAND, WARCH SONS, 1974 (HOSERTS): & MONTHS SAIS

LAW, ERNEST H; TO ATTEND ADVANCED STUDY INSTITUTE ON THEORY AND PRACTICE OF SYSTEMS IDENTIFICATION AND MODELLING -TOULOUSE, FRANCE - JULY 17-88, 1978 (Z008401); 6 MONTHS

#### TENNETTES

BIERNER, MARK W; TRAVEL TO ATTEND. INTERNATIONAL SYM-POSIUM ON CHEMISTRY IN EVOLUTION AND SYSTEMATICS. STRASBOURG, FRANCE, JULY 4-8, 1972 (BOJ4658); 6 MONTHS 8591

SHAHROKHI, FIROUZ: TO ATTEND. THE TWENTY-SECOND CONGRESS OF THE INTERNATIONAL ASTRONAUTICAL FEDERATION AND THE MEETING OF THE AMERICAN INSTITUTE OF AERONAUTICS AND AS-TRONAUTICS, BRUSSELS, BELGIUM, SEPTEMBER 18-44, 1971 (KOJOLIT): 6

MONTHS 1370

SCHAEFER, PHILIP W: TO ATTEND SYMPOSIUM ON LOGARITHMIC CONVEXITY AND NON WELL-POSED PROBLEMS, EDINBURGH, SCOT-LAND, MARCH 24-41, 1978, AND CONFERENCE ON THEORY OF ORDINA-RY AND PARTIAL DIFF, EQS., DUNDEE, SCOTLAND, MARCH 28-31, 1972 (POJJIJO): 6 MONTHS 1296

PETERSON, JOSEPH R: TRAVEL TO ATTEND- SYMPOSIUM ON THE CHEMISTRY OF TRANSURANIUM ELEMENTS, MOSCOW, RUSSIA, SEP.

TEMBER 4-4, 1972 (POSISSO); 6 MONTHS \$933

HARVEY, J A: TRAVEL TO ATTEND CONFERENCE ON NUCLEAR STRUCTURE STUDY WITH NEUTRONS, BUDAPEST, HUNGARY, JULY 41-AUGUST 1, 1978 (POS1918); 6 MONTHS \$616

PRATT, LEE H; TO ATTEND- NATO ADVANCED STUDY INSTITUTE ON PHYTOCHROME, ATHENS, GREECE, AUGUST 30 - SEFTEMBER 17, 1971 (ZOOMEO): 6 MONTHS \$666

MITTERER, RICHARD M; TO ATTEND- THE EIGHTH INTERNATIONAL SEDIMENTOLOGICAL CONGRESS BEING HELD IN HEIDELBERG, GER-MANY, AUGUST 20 . SEPTEMBER 5, 1971 AND THE FIFTH INTERNA-TIONAL MEETING ON ORGANIC GEOCHEMISTRY, HANNOYER, GER-MANY, SEPTEMBER 7-10, 1971 (A030141); 6 MONTHS \$655

REZAK, RICHARD; TO ATTEND- THE EIGHTH INTERNATIONAL SEDI-MENTOLOGICAL CONGRESS, HEIDELBERG, GERMANY, AUGUST 30 .

SEPTEMBER 4, 1971 (AGJO145); 6 MONTHS \$710

FRYXELL, GRETA A; TRAVEL TO ATTEND- SECOND SYMPOSIUM ON RECENT AND FOSSIL MARINE DIATOMS, LONDON, ENGLAND, U.K. SEPTEMBER 1-9, 1972 (A033985); 6 MONTHS \$818

HEIKKILA, WALTER J: TRAVEL TO ATTEND- COSPAR, FIFTEENTH PLENARY MEETING, MADRID, SPAIN, MAY 10-84, 1978 (A033481), 6 MONTHS \$560

WILHELM, JOHN A: TO VISIT THE UNIVERSITY OF GENEVA.

GENEVA, SWITZERLAND, NOVEMBER 1971 THROUGH NOVEMBER 1972 (8031461): 12 MONTHS 2719 SONG, PILL-SCON; TRAVEL SUPPORT TO ATTEND. FOURTH INTER-

VATIONAL SYMPOSIUM ON FLAVINS AND FLAVOPROTEINS, GER-MANY, MARCH 1972 (BOSESST); 6 MONTHS \$750 SIKLOSSY, LAURENT; TRAVEL TO ATTEND SECOND INTERNA-

TIONAL JOINT CONFERENCE ON ARTIFICIAL INTELLIGENCE. LON-DON, ENGLAND, SEPTEMBER 1-1, 1971 (J03028)1: 6 MONTHS \$350

SAGE, ANDREW P; TO ATTEND. THE FIFTH WORLD CONGRESS OF THE INTERNATIONAL FEDERATION OF AUTOMATIC CONTROL, PARIS. FRANCE, JUNE 12-17, 1972 (JOJE278): 6 MONTHS \$591

CRAWFORD, PAUL B, TRAVEL TO ATTEND. TENTH INTERNATIONAL SYMPOSIUM ON THE APPLICATION OF COMPUTER METHODS IN THE MINERAL INDUSTRY, JOHANNESBURG, SOUTH AFRICA, APRIL 9-14. 1974 (JOSSEGO); & MONTHS \$1,051

AGGARWAL, I K; TO ATTEND- THE 1971 IEEE INTERNATIONAL SYM-POSIUM ON ELECTRICAL NETWORK THEORY, LONDON, ENGLAND,

SEPTEMBER 6-10, 1971 (KOJOLLI); 6 MONTHS \$220

BAILEY, JAMES E; TRAVEL TO ATTEND SEMINAR ON TOPICS IN SYSTEM THEORY- PERIODIC OPTIMIZATION (KOJJJ28); 8 MONTHS \$520 KRISTIANSEN, M; TRAVEL TO ATTAND FIFTH EUROPEAN CON-FERENCE ON CONTROLLED FUSION AND PLASMA PHYSICS, GRENO-BLE, FRANCE, AUGUST 21-25, 1972 (KO11696); 6 MONTHS \$480

JUHASZ, STEPHEN; TRAVEL TO ATTEND. THIRTEENTH INTERNA-TIONAL CONGRESS OF TAM, MOSCOW, USSR, AUGUST 11-26 AND THE THIRTY-SIXTH CONFERENCE AND INTERNATIONAL MEETING OF FID. BUDAPEST, HUNGARY, SEPTEMBER 1-13, 1971 (NO31735); 6 MONTHS \$744

MOORE, C FRED; TO ATTEND- MEETING ON CHEMICAL ANALYSIS BY CHARGED PARTICLE BOMBARDMENT, BRUSSELS, BELGIUM, SEP-TEMBER 4-8, 1971 (F051008); 6 MONTHS \$725

GINGERICH, KARL A: TO VISIT AND LECTURE AT THE UNIVERSITY OF ZURICH AND FEDERAL UNIVERSITY OF SWITZERLAND, DECEMBER 18-31, 1911 (POSISSS); 6 MONTHS \$388

WAINERDI, RICHARD E: TRAVEL TO ATTEND SYMPOSIUM ON NUCLEAR ACTIVATION TECHNIQUES IN THE LIFE SCIENCES, LIUBL JANA, YUGOSLAVIA, APRIL 10-14, 1878 (POSSAIS): 6 MONTHS \$500

SHINE, HENRY J. TRAVEL SUPPORT TO ATTEND. FIFTH SYMPOSIUM ON ORGANIC SULFUR CHEMISTRY, LUND, SWEDEN, JUNE S.D. 1872

(Poss 100): 6 MONTHS \$680

SZEBEHELY, VICTOR: TRAVEL FOR- RESEARCH IN CELESTIAL MECHANICS TO ZURICH, SWITZERLAND AND ATHENS, GREECE AND TO ATTEND INTERNATIONAL MEETINGS IN OBERWOLFACH, WEST GERMANY AND VIENNA, AUSTRIA, AUGUST-NOVEMBER 1878 (POSLISS): S MONTHS MAD

CURL, ROBERT F: TRAVEL TO ATTEND, THE SECOND EUROPEAN MICROWAVE SPECTROSCOPY CONFERENCE, BANGOR, WALES, SEP-

TEMBER 14-44, 1974 (Possola); 6 MONTHS 1433

THOMAS, ROBERT W, TO ATTEND. TENTH CIRET. CONFERENCE, BRUSSELS, BELGIUM, SEPTEMBER 14-17, 1971 (SO:1031); 6 MONTHS \$170

HOLE, FRANK: TO ATTEND. 'RESEARCH SEMINAR IN ARCHAEOLOGY AND RELATED SUBJECTS', SHEFFIE'D. ENGLAND . DECEMBER 15-17. 1971 (SQ11670); 6 MONTHS \$635

FRANCESCHINI, GUY A: TRAVEL TO ATTEND. INTERNATIONAL RADIATION SYMPOSIUM, SENDAI, JAPAN, MAY 26-JUNE 8, 1872 (VOJ1454); 6 MONTHS \$1,130

FEAGIN, TERRY: TO ATTEND- NATO ADVANCED STUDY INSTITUTE ON DYNAMICAL ASTRONOMY AT CORTINA D'AMPEZZO, ITALY, AU-GUST 9-41, 1972 (2002595); 6 MONTHS \$713

### SOUTHWEST RESEARCH INSTITUTE

BLACK, DAVID L; THE III INTER-AMERICAN CONFERENCE ON MATERIALS TECHNOLOGY TO BE HELD IN RIO DE JANEIRO, AUGUST 14-17, 1378 (HO32423); 9 MONTHS & 000

### HATU

ALLEN, EDWARD H: TO ATTEND CYBERNETICS AND SYSTEMS RESEARCH MEETINGS! VIENNA, AUSTRIA . MAY #1.95, 1079 (SQJEGES): & MONTHS \$315

MULLER-SCHWARZE, C; TRAVEL TO ATTEND- THE TWELFTH INTER-NATIONAL ETHOLOGICAL CONFERENCE, EDINBURGH, GREAT BRITAIN, SEPTEMBER 1-16, 1971 (VOJ0013); 6 MONTHS \$795

### VERMONT

MCLAY, RICHARD W; TO ATTEND NATO ADVANCED STUDY IN-STITUTE ON FINITE ELEMENT METHODS IN CONTINUUM MECHANICS, LISBON, PORTUGAL, SEPTEMBER 7-17, 1971 (2009961); 6 MONTHS \$411

### VIRGINIA

JOHNSON, RONALD E: TO ATTEND-INTERNATIONAL SYMPOSIUM ON THE OCEANOGRAPHY OF THE SOUTH PACIFIC, WELLINGTON, NEW ZEALAND, FEBRUARY 9-15, 1972 (A011216); 6 MONTHS \$690

JOHNSON, RONALD E; TO ATTEND- INTERNATIONAL SYMPOSIUM ON THE OCEANOGRAPHY OF THE SOUTH PACIFIC, WELLINGTON, NEW ZEALAND, FEBRUARY 9-15, 1973 (A011946 001), 4627

MANGUM, CHARLOTTE P: TRAVEL SUPPORT TO ATTEND. MEETING ON EFFECT OF TEMPERATURE ON HETEROTHERMIC ORGANISMS. OBERGURGL, AUSTRIA. EIGHTH EUROPEAN MARINE BIOLOGICAL SYMPOSIUM, TEXEL, HOLLAND, SEPTEMBER 48 AND SEPTEMBER 11-16, 1972 (A033829); 6 MONTHS \$571

DANIELSON, DONALD A; TO OBTAIN INFORMATION ON SCIENTIFIC RESEARCH AND RELATED ACTIVITIES, COPENHAGEN, DENMARK, AND DELFT, THE NETHERLANDS, AUGUST 1-31, 1971 (POSOS98); 6 MONTHS 1436

EISENBERG, JUDAH M; TO ATTEND- THE FOURTH INTERNATIONAL CONFERENCE ON HIGH ENERGY PHYSICS AND NUCLEAR STRUCTURE, DUBNA, U.S.S.R., SEPTEMBER 1-11, 1971 (P030150); 6 MONTHS \$883

JENKINS, DAVID A; TO ATTEND. THE FOURTH INTERNATIONAL CONFERENCE ON HIGH ENERGY PHYSICS AND NUCLEAR STRUC-TURE, DUBNA, U.S.S.R., SEPTEMBER 7-11, 1971 (POJO451); 6 MONTHS \$648

SNYDER, LEWIS E; TRAVEL SUPPORT TO ATTEND. WORKSHOP ON MOLECULES IN SPACE, OBERSTDORF IN ALLGAU, WEST GERMANY, APRIL 17-19, 1972 (POS3709); 6 MONTHS \$611

TYREE, SHEPPARD Y JR; TRAVEL TO- INTERNATIONAL CON-FERENCE CHEMISTRY AT INTERFACES; ROVINJ, YUGOSLAVIA, JUNE 27-JULY 8, 1978 (POJ4617); 8 MONTHS \$474

PHILLIPS, MICHAEL W; ADV STY INST ON FELDSPARS MANCHESTER ENGLAND 7/11-20/72 (Z002554); 6 MONTHS 1464

### WASHINGTON

ROBERTSON, DAVID E; TO ATTEND SEMINAR ON MARINE RADIOECOLOGY BEING HELD IN HAMBURG, GERMANY, SEPTEMBER 20-24, 1871 (A030143); 6 MONTHS \$826

HALPERIN, WALTER: TO ATTEND- THE INTERNATIONAL SYMPOSI-UM ON PLANT TISSUE CULTURE, DELHI, INDIA, NOVEMBER 17-23, 1971 (BOJILE), 6 MONTHS \$1,116



BOSTROM, R. C; TRAVEL TO ATTEND- ROYA', SOCIETY (LONDON) MEETING ON SENSING BARTH DEFORMATION, LONDON, ENGLAND, MAY 16-18, 1919 (FOLISE): 6 MONTHS \$717

SOBOLEWSKI, JOHN 8; TO ATTEND- FIFTH AUSTRALIAN COMPUTER CONFERENCE, BRISBANE, AUSTRALIA, MAY 22-24, 1972 (JOSPOLE); 6 MONTHS 8859

CROWE, CLAYTON T; TO ATTEND-THE INTERNATIONAL SYMPOSIUM ON TWO-PHASE SYSTEMS, HAIFA, ISRAEL, AUGUST 89 -SEPTEMBER 2, 1971 (KO9099); & MONTHS \$500

ISHIMARU, AKIRA; TO ATTEND- THE 1871 INTERNATIONAL SYMPOSI-UM ON ANTENNAS AND PROPAGATION, SENDAI, JAPAN, SEPTEMBER 1-J, 1871 (KGJG94); 6 MONTHS \$600

STOEBE, THOMAS G; TO ATTEND- THE THIRD INTERNATIONAL CON-FERENCE ON LUMINESCENCE DOSIMETRY, ROSKILDE, DENMARK, OC-TOBER 11-14, 1871 (KOSO784); & MONTHS \$240

HEWITT, EDWIN; TO ATTEND. THE SYMPOSIUM ON CONTINUUM MECHANICS AND RELATED PROBLEMS OF ANALYSIS, TRILISI, GEOR-GIA, U.S.R., SEPTEMBER 83-89, 1971 (POJOSOS); 6 MONTHS \$1,198

CUNNINGHAM, TIMOTHY J. TO ATTEND-NATO ADVANCED STUDY IN-STITUTE ON STRUCTURAL, FUNCTIONAL AND CHEMICAL CHARAC-TERISTICS OF DEVELOPING NEURONS AND NEURON SETS, ST. VIN-CENT, ITALY, AUGUST 88 - SEPTEMBER 11, 1871 (2007210); 6 MONTHS \$500 FUHR, BICHARD D; ASI ON FACIAL STRUCT/COMPACT CONVEX SETS&APPLICA SWANSEA ENG 7/2-13/8 (2007339); 6 MONTHS \$417

#### WISCÓNSIN

BAILLY, STURGES W; FRAYEL TO ATTEND-INTERNATIONAL CLAY CONFERENCE, MADRID, SPAIN, JUNE 25-JULY 1, 1978 (A031175); 6 MONTHS \$328

REED, JOHN F; TRAVEL TO ATTEND. UNESCO INTERGOVERNMENTAL COORDINATING COUNCIL, PARIS, FRANCE, NOVEMBER 9-19, 1971 (84) 1596; 8 MONTHS \$964

VANDERKOOI, GARRET; TRAVEL TO ATTEND- SYMPOSIUM ON CON-FORMATION OF BIOLOGICAL POLYMERS, ISRAEL, APRIL 1972 (BOSS114); 6 MONTHS \$649

BURGESS, RICHARD R: TRAVEL TO ATTEND BIOCHEMISTRY OF GENE EXPRESSION IN HIGHER ORGANISMS, AUSTRALIA, MAY 1872 (BOSISSO): 6 MONTHS 1968

BROCK, THOMAS D; TRAVEL TO ATTEND SYMPOSIUM OF MODERN METHODS IN THE STUDY OF MICROBIAL ECOLOGY, UPPSALA, SWEDEN, JUNE 19-23, 1973 (BO34657); 6 MONTHS \$685

FERRY, JOHN D. TRAVEL SUPPORT TO- RECEIVE COLWYN MEDAL OF THE INSTITUTION OF THE RUBBER INDUSTRY, BRIGHTON, ENGLAND, MAY 17-19, 1992 (HOI4173); 6 MONTHS \$615

SHAPIRO, STUART C; TRAYEL TO ATTEND SECOND INTERNATIONAL JOINT CONFERENCE ON ARTIFICIAL INTELLIGENCE, LONDON, ENGLAND, SEPTEMBER 1-3, 1911 (JOSSES); 6 MONTHS \$350

TROST, BARRY M; TO PRESENT LECTURES AND CONDUCT RESEARCH AT THE INSTITUTE FOR ORGANIC CHEMISTRY, PHILIPPS UNIVERSITY, MARBURG, GERMANY, APRIL 1 - JULY 15, 1972 (POSE187): 6 MONTHS \$698

RUDIN, MARY E; TO ATTEND- MATHEMATICAL SOCIETY COLLOQUI-UM ON TOPOLOGY, KESZTHELY, HUNGARY, JUNE 19-23, 1972 (PGS2533); 6 MONTHS \$828

SCHRAG, JOHN L; TRAVEL SUPPORT TO ATTEND- THE ANNUAL MEETING OF THE CHEMICAL SOCIETY, MANCHESTER, ENGLAND, APRIL 11-18, 1978 (PAJ873J); 6 MONTHS \$672

LEYY, LAWRENCE S; TO ATTEND CONFERENCE ON RINGS, MODULES AND HONOLOGICAL METHODS, OBERWOLFACH, GERMANY, APRIL 10-MAY 8, 1971 (POSS188); 6 MONTHS \$624

COOPER, STUART L: TRAVEL TO-INTERNATIONAL SYMPOSIUM OF MACROMOLECULES, HELSINKI, FINLAND, JULY 2-8, 1972 (POS4687), 6 MONTHS \$750

SONNEDECKER, GLENN A; TO ATTEND 'INTERNATIONAL CONGRESS FOR THE HISTORY OF PHARMACY; PRAGUE, CZECHOSLOVAKIA - SEP-TEMBER 10-13, 1371 (S003)31); 12 MONTHS 2725

KLBIN, SHELDON: TRAVEL TO- CONDUCT RESEARCH IN MOSCOW, U.S.S.R., DECEMBER 1979 THROUGH MAY 1974 (SOSIO7E); 12 MONTHS \$945

RLUS, JOHN P; FEANIUNESCO SEMINAR ON CONT EDUCIENG IN HELSINKI FINLAND 8121-24/72 (ZOO2528); 11 MONTHS \$840

MCLINDEN, LYNN; ADV ST INST ON MATH PROG IN THEORY&PRAC-TICE COIMBR PORTUGAL 6/12-23/72 (Z002568); 6 MONTHS \$451

### WYOMING

HOLT, SMITH L; TO CONDUCT RESEARCH AND DISCUSS COLLABORATIVE RESEARCH PROGRAMS AT THE H. C. ORSTED INSTITUTE, COPENHAGEN, DENMARK, AND THE UNIVERSITY OF BORDEAUX, BORDEAUX, FRANCE, OCTOBER 1 - NOVEMBER 7, 1971 (POJOSJI); 6 MONTHS 4810

## INTERNATIONAL INSTITUTE FOR APPLIED SYSTEMS ANALYSIS

### DISTRICT OF COLUMBIA

NATIONAL ACADEMY OF SCIENCES

COLEMAN, JOPN 8; PLANNING DEVELOPMENT FOR U.S. PARTICIPA-TION IN PROPOSED INTERNATIONAL INSTITUTE FOR APPLIED SYSTEMS ANALYSIS (CHOISE 004): 6 NONTHS \$38,000

TODD, W MURRAY; US. PARTICIPATION IN THE PROPOSED INTER. NATIONAL INSTITUTE OF APPLIED SYSTEMS ANALYSIS (CAICAS); 36 MONTHS 6576-700

### SPECIAL FOREIGN CURRENCY-RESEARCH SUPPORT

#### SGYPT

AMERICAN UNIVERSITY OF CAIRO

BISHAY, ADLI, AND KREIDL, N J; THE STATES OF SILVER IN SELECTED VITREOUS SYSTEMS (FOSICOE XOO): 12 MONTHS \$20,070

#### INDIA

INDIAN INSTITUTE OF TECHNOLOGY

SODHA, M S; ANALYTICAL INVESTIGATION OF STEADY AND NON. STEADY ELECTROMAGNETIC WAVE PROPAGATION IN NONUNIFORM AND NONLINEAR MEDIA (FQJ111); 24 MONTHS \$21,166

#### UNIVERSITY OF DELIVI

AULUCK, F C; TO STUDY CONDENSED STATE OF MATTER BY NEUTRON SCATTERING (FOLISSI); 36 MONTHS \$45,155

SUNDARARAJ. B I: PHYSIOLOGICAL AND BIOCHEMICAL STUDIES OF THE LOCAL SPECIES OF HETEROPNEUSTES (FOLITS): 24 MONTHS 831.706

### INDIANA

INDIANA UNIVERSITY, BLOOMINGTON

VAUGHAN, JAMES H; CAVE DWELLING BERBERS OF SOUTHERN TU-NISIA (FOITOR); 12 MONTHS \$4,800

### **NEW YORK**

SPINDEL, WILLIAM; VISITING AMERICAN SCIENTIST AT BORIS KIDRIC INSTITUTE (FORDER COI); 12 MONTHS \$850

### OKLAHOMA

OKLAHOMA STATE UNIVERSITY

HADY, M ABDEL; REMOTE SENSING APPLICATIONS TO AGRICULTURE AND REGIONAL DEVELOPMENT PROJECTS (FOSH66°); 12 MONTHS \$91,120

HADY, M ABDEL, AND MUSTAFA, HASAN; APPLICATIONS OF MODERN AIRBORNE REMOTE SENSING AND ABRIAL RECONNAISSANCE TECHNIQUES TO AGRICULTURE AND REGIONAL DEVELOPMENT (FOSISSE OUT); 12 MONTHS \$17.810

### OREGON

UNIVERSITY OF OREGON - EUGENE

BOEKELHEIDE, VIRGIL; A COLLABORATIVE PROGRAM OF TEACHING AND RESEARCH AT THE POLYTECHNIC UNIVERSITY OF WROCLAW, WROCLAW, POLAND (F09999) 201); 12 MONTHS \$62.967

### PENNSYLVANIA

LEHIGH UNIVERSITY

LEIDHEISER, HENRY JR; CHARACTERIZATION OF HIGH-AREA AND LOW-AREA NICKEL AND NICKEL OXIDE (HOSE171 X00°); 12 MONTHS \$2,000

### POLAND

INSTITUTE OF NUCLEAR RESEARCH

BRZOZOWSKI, W S. TO STUDY INVESTIGATION OF THE ELECTRODE EFFECTS AND DISCHARGE STRUCTURE IN SEEDED PLASMA FLOWS (FOIDIII): 74 MONTHS \$43,346

RESEARCH CENTER FOR MONOCRYSTALS

NIEMYSKI, TADEUSZ; CRYSTAL GROWTH OF HIGH TEMPERATURE AND HIGH PRESSURE MATERIALS (FOSSED), 12 MONTHS \$52,165

### **SOUTH CAROUNA**

UNIVERSITY OF SOUTH CAROLINA

CONOLLY, JOHN R. KANES, WILLIAM H, AND FERM, JOHN C: INITIAL RIFTING OF EUROPE AND AFRICA AND GROWTH AND FOLDING OF THE JURASSIC ATLAS SEA, NOROCCO (FOJISIO X00°); 36 MONTHS \$496,000



#### TUNISIA

### UNIVERSITY OF TUNIS

BOUHDIBA, A, AND NOAH, HAROLD J; THE BRAIN DRAIN- AN INTER-NATIONAL COMPARATIVE STUDY (FOSTISS); 18 MONTHS \$21,820

#### YUGGSLAYLA

### BORIS KIDRICH INSTITUTE OF NUCLEAR SCIENCE

RIBNIKAR, SLOBODAN; CARBON-11 EXCHANGE IN LIQUID-GAS SYSTEMS AT LOW TEMPERATURES (FORDRE 001); 12 MONTHS \$4,000

RUVARAC, ALEKSANDAR, AND CLEARFIELD, ABRAHAM; THER-MODYNAMICS AND KINETICS OF ION EXCHANGE PROCESSES ON IN-ORGANIC ION EXCHANGERS (FOIROIS), 24 MONTHS \$39,996

### JOZEF STEFAN NUCLEAR INSTITUTE

LEBEZ, DRAGO, AND RUPLEY, JOHN; STUDIES ON TISSUE PROTEINASES (FOSISSO); 36 MONTHS \$76,701

### M PUPIN INST. AUTOMATION & TELECOMMUNICATIONS

VUKOBRATOVIC, MIOMIR, AND GAVRILOVIC, MOMCILO; LEGGED LOCOMOTION IN ANIMALS AND MACHINES (FOILDIS); 12 MONTHS \$35,000

### RUDJER BOSKOVIC INSTITUTE

PRAYDIC, VELIMIR; APPLICATION OF VARIOUS TECHNIQUES OF HIGH-AREA AND LOW-AREA NICKEL AND NICKEL OXIDE (FOSISSO); 26 MONTHS \$74,400

KVEDER, SERGIJE, AND GILMARTIN, MALVERN; THE PRIMARY PRODUCTION OF THE NORTHERN ADRIATIC SEA (FOSIDAT X00); 18 MONTHS \$90,052

### UNIVERSITY OF LJUBLIANA

KRANJC, FRANCE; THE QUALITY OF ELECTRICAL ENERGY (FOS1056): 14 MONTHS \$325,000

KUSCER, IVAN, AND SHEN, S F; THEORETICAL STUDY OF GAS-SUR-FACE INTERACTION (FOSSESS): 24 MONTHS \$15,000

#### UNIVERSITY OF SARAJEVO

MAGAZINOVIC, VOJISLAV, AND SMITH, JAMES J; MECHANISM OF IR-REVERSIBLE CHANGES IN HEMORRHAGIC SHOCK (FOSI886); 24 MONTHS \$10.670

### YUGOSLAV ACADEMY OF SCIENCES AND ARTS

KARSULIN, M; PROBLEMS IN ELECTROCHEMICAL AND CHEMICAL DEPOSITION AND DISSOLUTION OF METALS (FOSIOST); 12 MONTHS \$208,800

### YUGOSLAV COMMITTEE FOR ELECTRONIC AUTOMATION

TOMOVIC, RAJKO; INTERNATIONAL WORKSHOP SERIES ON BIOMEDICAL ENGINEERING (FOJ1820); 12 MONTHS \$50,000

### SPECIAL FOREIGN CURRENCY-TRAVEL SUPPORT

### ALABAMA

ABRAMOVITCH, RUDOLPH A; TRAVEL TO DISCUSS COOPERATIVE PROJECT WITH SCIENTISTS IN POLAND (FOSJ200); 6 MONTHS \$1,260

COOPER, MAX D; TRAVEL TO ATTEND. FOURTH INTERNATIONAL CONFERENCE ON LYMPHATIC TISSUE AND GERMINAL CENTERS IN IMMUNE REACTIONS, DUBROVNIK, YUGOSLAVIA, JUNE 26-50, 1972 (FOISSST); & MONTHS \$815

### ARIZONA

HADLEY, NEIL F; TRAVEL SUPPORT TO ATTEND- SYMPOSIUM ON PHYSIOLOGICAL ECOLOGY OF PLANTS AND ANIMALS IN EXTREME ENVIRONMENTS, DUBROVNIK, YUGOSLAVIA, MARCH 20-30, 1972 (F0J2888): 6 MONTHS \$760

### BULGARIA

NONE; OTHER PROGRAM AWARDS (01AWDS); \$45

### CAUFORNIA

CHARWAT, ANDREW F; TO ATTEND- THE TENTH BIENNIAL FLUID DYNAMICS SYMPOSIUM, WARSAW, POLAND, SEPTEMBER 6-14, 1971 (F030761); 6 MONTHS \$903

ROBERSON, ROBERT E; TO ATTEND- THE FOURTH IFAC SYMPOSIUM ON AUTOMATIC CONTROL IN SPACE, DUBROVNIK, YUGOSLAVIA, SEP-TEMBER 6-10, 1971 (F030790); 6 MONTHS \$750

GILMARTIN, MALVERN; TO ATTEND-SIXTH EUROPEAN SYMPOSIUM ON MARINE BIOLOGY, ROVINJ, YUGOSLAVIA, SEPTEMBER 27 -OC-TOBER 9, 1971 (FO30856); 6 MONTHS \$1,180 EL-SUM, HUSSEIN M A: TRAVEL SUPPORT TO EGYPT TO DEVELOP

COOPERATIVE PROJECTS IN ACOUSTICAL HOLOGRAPHY AND RE-LATED SUBJECTS (FOSERE); 6 MONTHS \$1,060

WEIGLE, WILLIAM O; TRAVEL TO ATTEND- FOURTH INTERNA-TIONAL CONFERENCE ON LYMPHATIC TISSUE AND GERMINAL CEN-TERS IN IMMUNE REACTIONS DUBROVNIK, YUGOSLAVIA, JUNE 26-30, 1979 (F033596); 6 MONTHS \$1,086

AXFORD, WILLIAM I; \*\*\*SPECIAL FOREIGN CURRENCY TRAVEL AWARD (IN POLISH CURRENCY) TO ATTEND SEVENTEENTH GENERAL ASSEMBLY OF INTL UNION OF RADIO SCIENCE, WARSAW, POLAND AUGUST 18-19, 1978 (FOS 1315); 6 MONTHS \$850

FEJER, JULES A; \*\*\*SPECIAL FOREIGN CURRENCY TRAVEL AWARD (IN POLISH CURRENCY) TO ATTEND. THE SEVENTEENTH GENERAL ASSEMBLY OF THE INTL. UNION OF RADIO SCIENCE IN WARSAW, PO-LAND AUGUST 18-49, 1978 (FOI4540); 6 MONTHS \$300

COHEN, MARSHALL H; \*\*\*SPECIAL FOREIGN CURRENCY TRAVEL AWARD (IN POLISH CURRENCY) TO ATTEND. THE SEVENTEENTH GENERAL ASSEMBLY OF THE INTL. UNION OF RADIO SCIENCE IN WARSAW, POLAND AUGUST 18-10, 1974 (FOMMIN); 6 MONTHS \$709

COHEN, MARVIN L; \*\*\*SPECIAL FOREIGN CURRENCY TRAVEL AWARD (IN POLISH CURRENCY) TO ATTEND- ELEVENTH INTERNA-TIONAL CONFERENCE ON THE PHYSICS OF SEMICONDUCTORS, WAR-SAW, POLAND, JULY 25-29, 1972 (FOSILIS): 6 MONTHS \$1.062

#### COLORADO

CLAMAN, HENRY N; TRAVEL TO ATTEND- FOURTH INTERNATIONAL CONFERENCE ON LYMPHATIC TISSUE AND GERMINAL CENTERS IN IMMUNE REACTIONS, DUBROVNIK, YUGOSLAVIA, JUNE \$5-30, 1978 (FO33598); 6 MONTHS 8549

#### CONNECTICUT

PHILLIPS, ARIS; TRAVEL TO ATTEND- SYMPOSIUM ON FOUNDA-TIONS OF PLASTICITY, WARSAW, POLAND, AUGUST 19-SEPTEMBER 1, 1972 (FO43769): 6 MONTHS \$654

WEIRE, DENIS L; \*\*\*SPECIAL FOREIGN CURRENCY AWARD (IN POLISH CURRENCY) TO ATTEND- THE ELEVENTH INTL. CONFERENCE ON THE PHYSICS OF SEMICONDUCTORS, WARSAW, POLAND, JULY 25-49, 1974 (FGS4395); 6 MONTHS \$567

#### DISTRICT OF COLUMBIA

ROBERTS, A HOOD; TRAVEL TO DEVELOP COOPERATIVE PROJECTS WITH SCIENTIFIC INSTITUTIONS IN POLAND (FORESES); 6 MONTHS \$996 WOYNA, ADAM G: TRAVEL TO DEVELOP COOPERATIVE PROJECTS WITH SCIENTIFIC INSTITUTIONS IN POLAND (FOSESE); 6 MONTHS \$996

#### HAWAN

SITARAM, K S; TRAVEL TO- DEVELOP COOPERATIVE PROJECTS WITH SCIENTISTS IN INDIA (FOISSE): 6 MONTHS \$1,508

CHILDRESS, DUDLEY S; TRAVEL TO ATTEND. FOURTH INTERNA-TIONAL SYMPOSIUM ON EXTERNAL CONTROL OF HUMAN EXTREMI-TIES, DUBROVNIK, YUGOSLAVIA, AUGUST 28 - SEPTEMBER 2, 1872 (FO33500): 6 MONTHS \$791

CARLSON, LAWRENCE E; TRAVEL TO ATTEND- FOURTH INTERNA-TIONAL SYMPOSIUM ON EXTERNAL CONTROL OF HUMAN EXTREMI-TIES, DUBROVNIK, YUGOSLAVIA, AUGUST 28 - SEPTEMBER 2, 1972 (FOJJ600): 6 MONTHS 1796

JORDAN, E C; \*\*\*SPECIAL FOREIGN CURRENCY TRAVEL AWARD (IN POLISH CURRENCY) TO ATTEND- THE SEVENTEENTH GENERAL AS-SEMBLY OF THE INTL. UNION OF RADIO SCIENCE IN WARSAW, PO-LAND AUGUST 18-29, 1972 (FOSISSE); 6 MONTHS \$690

### INDIA

NONE; OTHER PROGRAM AWARDS (02AWDS); \$4,412

HENTZ, ROBERT R; TO DEVELOP A PROJECT FOR RESEARCH COL-LABORATION, BELGRADE, YUGOSLAVIA, AUGUST 28, 1971 THROUGH SEPTEMBER 6, 1971 (FO30928); 6 MONTHS \$818

GABRIEL. ASTRIK L: TRAVEL TO- POLAND TO NEGOTIATE THE PER-MISSION OF MICROFILMING MANUSCRIPTS IN POLISH LIBRARIES IN CRACOW, WROCLAW AND WARSAW, JUNE 1972 (Fossion); 6 MONTHS

### **IOWA**

LONNGREN, KARL E; TRAVEL TO ATTEND- SIXTH YUGOSLAV SYM-POSIUM AND SUMMER SCHOOL ON THE PHYSICS OF IONIZED GASES. SPLIT, YUGOSLAVIA, JULY 16-22, 1972 (FOSS166); 6 MONTHS \$676

LOUISIANA STATE UNIVERSITY, NEW ORLEANS

GUILBAULT, GEORGE G: DEVELOPMENTAL VISIT TO INDIA, EGYPT AND YUGOSLAVIA (Fosisso); 3 Months \$1,500

### MARYLAND

NEWCOMB, ROBERT W; TRAVEL SUPPORT TO DISCUSS COOPERA-TIVE RESEARCH PROJECT WITH SCIENTISTS IN POLAND (FOS1866); 6 MONTHS \$1,210



DECLARIB, NICHOLAB; TRAVEL SUPPORT TO DISCUSS COOPERA-TIVE RESEARCH PROJECT WITH SCIENTISTS IN POLAND (FOSMOR); 6 MONTHS \$1,004

KATZ, ISADORE; \*\*\*SPECIAL FOREION CURRENCY TRAVEL AWARD (IN POLISH CURRENCY) TO ATTEND. SEVENTEENTH GENERAL AS-SEMBLY OF INTL. UNION OF RADIO SCIENCE, WARSAW, POLAND AU-GUST 18-8, 1918 (FOLISIS); & MONTHS \$791

### MASSACHUSETTS

SCHELL, I I; TO DEVELOP COOPERATIVE RESEARCH PROJECT WITH INDIA METEOROLOGICAL DEPARTMENT IN NEW DELHI, INDIA (FOI1811); 6 MONTHS \$1,836

WILSON, DUNCAN M; TRAVEL TO VISIT-ZEZELJ INSTITUTE, BELGRADE, YUGOSŁAVIA, APRIL 17 - 22, 1272 (FOJJ259); 6 MONTHS \$738

EVANS, J V; \*\*\*SFECIAL FOREION CURRENCY TRAVEL AWARD (IN POLISH CURRENCY) TO ATTEND- SEVENTEENTH GENERAL AS-SEMBLY OF THE INTL. UNION OF RADIO SCIENCE IN WARSAW, PO-LAND AUGUST 14-19, 1974 (FOSISJS); 8 MONTHS \$144

#### BOSTON UNIVERSITY

VALIELA, IVAN; TO ATTEND. CONFERENCE ON PHYSIOLOGICAL ECOLOGY OF PLANTS AND ANIMALS IN EXTREME ENVIRONMENTS, DUBROVNIK, YUGOSLAVIA, MARCH 10-24, 1214 (F032222); 6 MONTHS \$604

### MICHIGAN

MCNABB, CLARENCE D JR; TRAVEL SUPPORT TO ATTEND- THE SYM-POSIUM PHYSIOLOGICAL ECOLOGY PLANTS AND ANIMALS IN EX-TREME ENVIRONMENTS, DUBROVNIK, YUGOSLAVIA, MARCH #6-30, 1972 (FOM1837); 6 MONTHS \$695

### MICHIGAN STATE UNIVERSITY

BANDURSKI, ROBERT S; TO PRESENT LECTURES TO POLISH SCIENTIFIC CENTERS IN WARSAW, POZNAN, WROCLAW, AND CRACOW MARCH APRIL, 1972 (FOSE106); 6 MONTHS \$586

#### MINNESOTA

HODGE, PHILIP G JR; TRAVEL SUPPORT TO ATTEND-SYMPOSIUM ON FOUNDATIONS OF PLASTICITY, WARSAW, POLAND, AUGUST 30-SEPTEMBER 8, 1872 (F03288); 8 MONTHS \$740

COLLINS, ROBERT 3; \*\*\*SPECIAL FOREIGN CURRENCY TRAVEL AWARD (IN POLISH CURRENCY) TO ATTEND- SEVENTEENTH GENERAL ASSEMBLY OF THE INTL UNION OF RADIO SCIENCE, WAR-SAW, POLAND AUGUST 18-29, 1973 (FOGUST); 8 MONTHS 8945

### MOROCCO

NONE; OTHER PROGRAM AWARDS (01AWDS); \$1,745

### NEW HAMPSHIRE

MORGAN, MILLETT G; \*\*\*SPECIAL FOREIGN CURRENCY TRAVEL AWARD (IN POLISH CURRENCY) TO ATTEND- THE SEVENTEENTH GENERAL ASSEMBLY OF THE INTL UNION OF RADIO, SCIENCE, WAR-SAW, POLAND AUGUST 18-19, 1974 (FOLJIS); 6 MONTHS \$793

### NEW JERSEY

TEMMER, GEORGES M; TRAVEL TO-LECTURE AT POLISH SUMMER SCHOOL IN NUCLEAR PHYSICS, RUDZISKA, POLAND, AUGUST 21-SEP-TEMBER 2, 1272 (FOJ3593); 6 MONTHS \$372

HOFFMAN, JOHN S; TRAVEL TO ATTEND- THE THIRD INTERNA-TIONAL COURSE ON GERONTOLOGY, 'LEISURE AND THE THIRD AGE,' DUBROYNIK, YUGOSLAVIA, MAY 13-19, 1972 (FOJJ603); 6 MONTHS \$650

FAIRBROTHERS, DAVID E; \*\*\*TRAVEL TO PRESENT A SERIES OF LECTURES ON CHEMOSYSTEMATICS TO POLISH SCIENTISTS - POZ-NAN, POLAND JUNE 22 - JULY 2, 1972 (FOJ1861); 6 MONTHS \$590

### **NEW MEXICO**

NIX, JAMES R; TRAVEL SUPPORT TO ATTEND- THE INTERNATIONAL SUMMER SCHOOL IN NUCLEAR PHYSICS, MASURIAN DISTRICT, POLAND, AUGUST 81-SEPTEMBER 8, 1972 (FGJ2968); 6 MONTHS \$972

### **NEW YORK**

GHAUSI, MOHAMMED S; TRAVEL SUPPORT TO ATTEND-THE SECOND INTERNATIONAL SYMPOSIUM ON NETWORK THEORY, HERCEG-NOVI, YUGOSLAVIA, JULY 3-5, 1972 (F032835); 12 MONTHS \$525

GREGOR, HARRY P: TRAVEL SUPPORT TO DELIVER PAPER AT CON-FERENCE ON CHEMISTRY OF SOLID LIQUID INTERFACES ROVINJ, YU-GOSLAVIA JUNE 27-JULY 3, 1972 (F0JJ201): 6 MONTHS \$380

WANG, JIUNN MING; TRAVEL TO ATTEND THIRD INTERNATIONAL COLLOQUIUM ON MULTIPARTICLE REACTIONS, ZAKOPANE, POLAND, JUNE 20-24, 1912 (F03)402); 6 MONTHS \$654

SHINOZUKA, MASANOBU; TRAVEL TO ATTEND- CONFERENCE ON STOCHASTIC METHODS IN STRUCTURAL MECHANICS, JABLONNA, POLAND, JUNE 5-15, 1872 (F0JJ601); 6 MONTHS \$550

### **NORTH CAROUNA**

BOOKHOUT, CAZLYN G; VI EUROPEAN SYMPOSIUM IN MARINE BIOLOGY, BEING HELD IN ROVINI, YUGOSLAVIA, SEPTEMBER 87, 1971 -OCTOBER 8, 1871 (FOSI184); 6 MONTHS \$505

#### PAKISTAN

NONE; OTHER PROGRAM AWARDS (MAWDS); \$2,583

#### **PENNSYLVANIA**

BROZEK, JOSEF; TO ATTEND THE FOURTH CONGRESS OF THE YUGOSLAV PSYCHOLOGICAL ASSOCIATION, BLED, SLOVENIA, YUGOSLAVIA, OCTOBER 6-9, 1971 (FOSOTST); 6 MONTHS \$710

RIDGE, JOHN D; TO CONTINUE WORK IN POLAND ON THE GENESIS OF THE LEAD-ZINC DEPOSITS OF THE KRAKOW-UPPER SILESIAN RE-GION DURING THE SPRING OF 1814 (F050850); 6 MONTHS \$162

FITE, WADE L; TRAVEL TO ATTEND-SIXTH SUMMER SCHOOL ON THE PHYSICS OF IONIZED GASES, SPLIT, YUGOSLAVIA, JULY 16-41, 1876 (FOSISOZ); 6 MONTHS \$633

FUNKHOUSER, G RAY; TRAVEL TO- DISCUSS COOPERATIVE PRO-JECT WITH SCIENTISTS IN YUGOSLAVIA (FOJJROJ); 6 MONTHS \$890

BAUM, RAINER C; TRAVEL SUPPORT TO ATTEND-INTERNATIONAL SOCIOLOGICAL CONFERENCE ON MODERNIZATION, WARSAW, POLAND, JUNE 11-18, 1918 (FOSJ606); 6 MONTHS \$817

SUDA, ZDENEK L; TRAVEL SUPPORT TO ATTEND-INTERNATIONAL SOCIOLOGICAL CONFERENCE ON MODERNIZATION, WARSAW, POLAND, JUNE 11-18, 1978 (F03)607); 6 MONTHS \$817

WILLIS, YOLANDA A; TRAVEL SUPPORT TO ATTEND- INTERNA-TIONAL SOCIOLOGICAL CONFERENCE ON MODERNIZATION, WARSAW, POLAND, JUNE 11-18, 1972 (F03)808); 6 MONTHS \$817

MALENBAUM, WILFRED; \*\*\*SPECIAL FOREIGN CURRENCY TRAVEL AWARD (IN INDIAN CURRENCY) TO DEVELOP COOPERATIVE PRO-JECTS WITH SCIENTISTS IN INDIA (FO34803); 6 MONTHS \$1,306

#### POLAND

NONE; OTHER PROGRAM AWARDS (18AWDS); \$8,348

#### RHODE ISLAND

LOFERSKI, JOSEPH J; \*\*\*SPECIAL FOREIGN CURRENCY TRAVEL AWARD (IN POLISH CURRENCY) TO ATTEND- ELEVENTH INTERNA-TIONAL CONFERENCE ON THE PHYSICS OF SEMICONDUCTORS, WAR-SAW, POLAND, JULY \$5-89, 1978 (FOSIJSO), & MONTHS \$591

### TENNESSEI

LARSEN, JOHN W; TRAVEL SUPPORT TO- CONSULT WITH MRS. M.E. MAKSIC ABOUT HER THESIS AND SIT AS AN EXAMINER FOR HER FINAL ORAL EXAMINATION, ZAGREB, YUGOSLAVIA, SEPTEMBER 1972 (FO1323): 6 MONTHS \$707

HANNA, M G JR; TRAVEL TO ATTEND. FOURTH INTERNATIONAL CONFERENCE ON LYMPHATIC TISSUE AND GERMINAL CENTERS IN IMMUNE REACTIONS, DUBROVNIK, YUGOSLAVIA, JUNE 26-30, 1078 (F03/594); 6 MONTHS \$832

CONGDON, CHARLES C; \*\*\*TRAVEL TO ATTEND- FOURTH INTERNA-TIONAL CONFERENCE ON LYMPHATIC TISSUE AND GERMINAL CEN-TERS IN IMMUNE REACTIONS, DUBROVNIK, YUGOSLAVIA, JUNE 26-JO, 1029- (F035365): 6 MONTHS 3610

### TEXAS

WILLIAMSON, WALTON E JR; TO ATTEND- THE FOURTH IFAC SYM-POSIUM ON AUTOMATIC CONTROL IN SPACE, DUBROVNIK, YU-GOSLAVIA, SEPTEMBER 6-10, 1871 (FOJOT88); 6 MONTHS \$885

FREEMAN, RONALD H; TRAVEL TO- LJUBLIANA, YUGOSLAVIA, TO PERFORM RESEARCH AT JOZEF STEFAN INSTITUTE FOR A YEAR ON A POST-DOCTORATE RESEARCH GRANT, SEPTEMBER 1872 -SEP-TEMBER 1873 (F03)4603), 12 MONTHS \$2,027

JOHNSON, FRANCIS S; \*\*\*SPECIAL FOREIGN CURRENCY TRAVEL AWARD (IN POLISH CURRENCY) TO ATTEND- THE SEVENTEENTH GENERAL ASSEMBLY OF INTERNATIONAL UNION OF RADIO SCIENCE, WARSAW, POLAND AUGUST 18-19 1971 (FO1514); 6 MONTHS \$984

STRAITON, ARCHIE W; \*\*\*SPECIAL FOREIGN CURRENCY TRAVEL AWARD (IN POLISH CURRENCY) TO ATTEND- THE SEVENTEENTH GENERAL ASSEMBLY OF THE INTL. UNION OF RADIO SCIENCE, WAR-SAW, POLAND AUGUST 18-26, 1979 (FOULDS); & MONTHS \$TM

### TUNISIA

NONE; OTHER PROGRAM AWARDS (0JAWDS); \$2,388

### UNITED ARAB REPUBLIC

NONE; OTHER PROGRAM AWARDS (06AWDS): \$4,958

### VIRGINIA

MELOY, THOMAS P; ORGANIZATION OF THE CONFERENCE ON BEHAVIOR OF PARTICULATE SYSTEMS TO BE HELD IN POLAND DUR-ING 1972 (F030943); 6 MONTHS \$490



HEATH, ALAN G; TRAVEL SUPPORT TO ATTEND- SYMPOSIUM ON PHYSIOLOGICAL ECOLOGY OF PLANTS AND ANIMALS IN EXTREME ENVIRONMENTS, DUBROVNIK, YUGOSLAVIA, MARCH #6-30, 1978 (FOSE)1); 6 MONTHS \$569

### UNIVERSITY OF VIRGINIA

CHEN, CHARLES 8; TO SERVE AS A TECHNICAL CONSULTANT TO THE RUDER BOSKOVIC INSTITUTE IN DESIGNING AND DEVELOPING A MACH-ZEHNDER INTERFEROMETER, ZAGREB, CROATIA, YU-GOSLAVIA, JULY 1972 (FOJ2168); 6 MONTHS \$1,089

### WEST VIRGINIA

KOTB, A X; \*\*\*SPECIAL FOREIGN CURRENCY TRAVEL AWARD (IN EGYPTIAN AND TUNISIAN CURRENCY) TO DEVELOP COOPERATIVE PROJECTS WITH SCIENTISTS IN EGYPT AND TUNISIA (FGJUI); 6 MONTHS \$1,340

### WISCONSIN

MINNICH, JOHN E, TRAVEL SUPPORT TO ATTEND-SYMPOSIUM ON PHYSIOLOGICAL ECOLOGY OF PLANTS AND ANIMALS IN EXTREME

ENVIRONMENTS, DUBROVNIK, YUGOSLAVIA, MARCH 16-30, 1972 (FGJ2890); 6 MONTHS 8699 VERMA, MANINDRA K; TO DEVELOP AND DISCUSS COOPERATIVE

VERMA, MANINDRA K; TO DEVELOP AND DISCUSS COOPERATIVE PROJECTS WITH INDIAN SCIENTISTS (FOSSIOS); 6 MONTHS \$1,718 PELLA, MILTON O; TRAVEL TO-DEVELOP A COOPERATIVE PROJECT WITH AIN SHAMS UNIVERSITY (FOSSIOS); 6 MONTHS \$1,400

### YUGOSLAVIA

KRIEBEL, HOWARD B; \*\*\*SPECIAL FOREIGN CURRENCY TRAVEL AWARD (IN INDIAN RUPEES) TO DISCUSS AND DEVELOP COOPERATIVE PROJECT WITH SCIENTISTS IN LUCKNOW, INDIA JUNE 21JULY 2, 1972 (FOJ 1993); 6 MONTHS \$963

NONE; OTHER PROGRAM AWARDS (\$\$AWDS); \$11,227

### INTERNATIONAL TRAVEL PROGRAM

### WISCONSIN

BARRY, MERTON R; TO ATTEND- THE PLANNING MEETING OF THE PERMANENT COMMITTEE ON ENGINEERING EDUCATION OF UPADI, KINGSTON, JAMAICA, SEPTEMBER 18-21, 1971 (F031249); 6 MONTHS \$250

# **SCIENCE INFORMATION SERVICES**

# SYSTEMS DEVELOPMENT AND IMPROVEMENT

### INFORMATION SYSTEMS

### DISTRICT OF COLUMBIA

AMBRICAN POLITICAL SCIENCE ASSOCIATION

KIRKPATRICK, EVRON M; DEVELOPMENT OF A THESAURUS FOR POLITICAL SCIENCE (C722000): 12 MONTHS \$115,985

ABRICAN PSYCHOLOGICAL ASSOCIATION

LITTLE, KENNETH B; DEVELOPMENT OF A THEASURUS OF PSYCHOLOGICAL TERMS (C749000): 6 MONTHS \$78,220

GEORGE WASHINGTON UNIVERSITY

SHILLING, CHARLES W; PLANNING AND DEVELOPMENT OF PROGRAMS FOR THE COMMITTEE ON SCIENTIFIC AND TECHNICAL INFORMATION (CT45000); 10 MONTHS \$58,413

MITHSONIAN INSTITUTION

SHETLER, STANWYN G; FLORA NORTH AMERICA (FNA) PROGRAM (C720000); 7 MONTHS \$69,153

### MARYLAND

JOHNS HOPKINS UNIVERSITY

GREENBERGER, MARTIN; SUPPORT OF REVIEW OF THE COMMITTEE ON SCIENTIFIC AND TECHNICAL INFORMATION (COSATI) (C711000); 6 MONTHS 412,000

NATIONAL BURBAU OF STANDARDS

DAVIS, RUTH M; ASSESSMENT OF PRESENT STATUS OF AUTOMATED SCIENTIFIC AND TECHNICAL INFORMATION SYSTEMS (CA6600); 6 MONTHS 854,000

DAVIS, RUTH M; INTERAGENCY AGREEMENT FOR ASSESSMENT OF PRESENT STATUS OF AUTOMATED SCIENTIFIC AND TECHNICAL INFOR: ATION SYSTEMS (CA88000 001); 13 MONTHS \$141,000

### **NEW YORK**

AMERICAN INSTITUTE OF PHYSICS

KOCH, H WILLIAM; NATIONAL INFORMATION SYSTEM FOR PHYSICS-STAGE II DEVELOPMENT (NOOMAL 002); 8 MONTHS 4382517

### PENNSYLVANIA

BIOLOGICAL ABSTRACTS

SMITH, J B; A STUDY OF BIOSIS-CAS COMPATIBILITY OF BIBLIO-GRAPHIC DESCRIPTIONS (C719000): 10 MONTHS \$9,100

### TEXAS

EICHER, LAWRENCE D; OTHER PROGRAM AWARDS (01AWDS): 12 MONTHS \$22,160

### SPECIAL PROJECTS

### CALIFORNIA

STANFORD UNIVERSITY

PARKER, EDWIN B; SPIRES 'STANFORD PHYSICS INFORMATION RETRIEVAL SYSTEM' (NOOOBSO 002); 12 MONTHS \$274,900

### GEORGIA

UNIVERSITY OF GEORGIA

CARMON, JAMES L; TO EXPAND THE UNIVERSITY OF GEORGIA IN-FORMATION CENTER (NOOOSSI OOS); 12 MONTHS \$170,600

### MINNESOTA

HAMLINE UNIVERSITY

KING, JACK B, AND MCDONOUGH, GEORGE E; CONTINUATION OF IN-FORMATION SYSTEM DEVELOPMENT PROGRAM FOR HAMLINE UNIVERSITY LIBRARY (NOODE78 008); 17 MONTHS \$168,500

### **NEW YORK**

COLUMBIA UNIVERSITY

FASANA, PAUL J, AND HAAS, WARREN J; LIBRARY SYSTEMS DEVELOPMENT FOR A LARGE RESEARCH LIBRARY (NOOC684 002); 24 MONTHS \$175,600

#### OHIO

OHIO STATE UNIVERSITY

LAZORICK, GERALD J; MECHANIZED INFORMATION CENTER (NO27458 001); 12 MONTHS \$276,500

### PENNSYLVANIA

LEHIGH UNIVERSITY

HILLMAN, DONALD J; UNIVERSITY CENTERED INFORMATION SYSTEM-PROJECT LEADERMART (NOOM & FOOL); 10 MONTHS \$270,000 HILLMAN, DONALD J; UNIVERSITY CENTERED INFORMATION

SYSTEM- PROJECT LEADERMART (NOCOSES OCS); 6 MONTHS \$130,000

UNIVERSITY OF PITTSBURGH

KENT, ALLEN, DEBONS, ANTHONY, ROSSELL, GLENORA, AND HOWILL, EDMOND; A CAMPUS-BASED INFORMATION SYSTEM (NO07557 001): 12 MONTHS \$138.900

### CHEMICAL INFORMATION

### DISTRICT OF COLUMBIA

AMERICAN CHEMICAL SOCIETY

WALL, FREDERICK T; CONTRACT FOR THE DEVELOPMENT OF COM-PUTER-BASED INFORMATION HANDLING SYSTEMS FOR CHEMICAL ENGINEERING INFORMATION (C656000 003); 9 MONTHS \$1,818,300

WALL, FREDERICK T; CONTRACT FOR THE DEVELOPMENT OF COM-PUTER-BASED INFORMATION HANDLING SYSTEMS FOR CHEMICAL ENGINEERING INFORMATION (C454000 004); 2 MONTHS \$1,319,019

WALL, FREDERICK T; CONTRACT FOR THE DEVELOPMENT OF COM-PUTER-BASED INFORMATION HANDLING SYSTEMS FOR CHEMICAL ENGINEERING INFORMATION (C454000 007); 1 MONTHS \$237,940

JOHN I THOMPSON AND COMPANY

PIELMEIER, G R; CONTRACT FOR THE PRODUCING OF EXPOSITORY INFORMATION ON THE DISCIPLINE ORIENTED, COMPUTER BASED CHEMICAL INFORMATION SYSTEM BEING DEVELOPED PRIMARILY BY THE CHEMICAL ABSTRACTS SERVICE OF THE AMERICAN CHEMICAL SOCIETY (CS1000 003); 6 MONTHS \$5,000

PIELMEIER, G R; CONTRACT FOR THE PRODUCING OF EXPOSITORY INFORMATION ON THE DISCIPLINE-ORIENTED, COMPUTER-BASED CHEMICAL INFORMATION SYSTEM BEING DEVELOPED PRIMARILY BY THE CHEMICAL ABSTRACTS SERVICE OF THE AMERICAN CHEMICAL SOCIETY (C551000 000); 4 MONTHS \$19,600

### OHIO

AMERICAN CHEMICAL SOCIETY-CHEMICAL ABSTRACTS SERVICE

TATE, FRED A; CONTRACT FOR DEVELOPMENT OF COMPUTER-MANAGED DATA BASE FOR THE FIELDS OF CHEMISTRY AND CHEMI-CAL ENGINEERING (CSS)000 006); 6 MONTHS \$412,400



### INFORMATION SERVICES AND PUBLICATIONS

#### DISTRICT OF COLUMNIA

NONE: OTHER PROGRAM AWARDS (OJAWDS): \$2,660

AUTOMATED SYSTEMS CORPORATION

MORRISON, HOWARD; TASK ORDER FOR CHANGES TO PL-440 ACTIVI-TIES SYSTEM (C44,004): 1 MONTHS \$9,590

MORRISON, HOWARD H; TASK ORDER FOR CHANGES TO PL-140 AC-TIVITIES SYSTEM NSF-C684, T.O. AM. (C684000 001); 1 MONTHS \$6,116

#### VIRGINIA

NONE; OTHER PROGRAM AWARDS (OFAWDS): \$450

### INFORMATION SERVICES

### CALIFORNIA

UNIVERSITY OF CALIFORNIA, BERKELEY

GREGORY, JOSEPH T; PREPARATION OF THE BIBLIOGRAPHY OF FOSSIL VERTEBRATES (NO00403 001); 12 MONTHS \$32,800

UNIVERSITY OF CALIFORNIA, SAN DIEGO-SCRIPPS INSTITUTION OF OCEANOGRAPHY

RIEDEL, WILLIAM R; PREPARATION OF A SPECIES CATALOGUE OF POLYCYSTINE RADIOLARIA (NO00687 008); 19 MONTHS \$75,200

BRINTON, EDWARD; SCIENTIFIC RESULTS OF THE NAGA EXPEDITION TO THE GULF OF THAILAND AND SOUTH CHINA SEA, 1935-1961 (NGJ8578): 12 MONTHS 817.700

#### COLORADO

UNIVERSITY OF COLORADO

SMITH, ALBERT; ATLAS OF ARID ENVIRONMENTS OF THE U.S. (NOJ1941): 12 MONTHS \$10.700

ROGERS, DAVID I; PUBLICATION OF 'NORTH AMERICAN SPECIES OF 'MANIHOT' (NOJIBLE): 18 MONTHS \$5.000

IVES, J. D., AND BLACKIE, KATHLEEN A: PUBLICATION OF :ARCTIC AND ALPINE RESEARCH: (NOISEST): 36 MONTHS \$31,000

#### DISTRICT OF COLUMBIA

AMERICAN GEOLOGICAL INSTITUTE

HOOVER, LINN; GEOLOGICAL REFERENCE FILE- OPERATION OF A COMPUTER-BASED BIBLIOGRAPHIC DATA BANK (NO00647 00.1); \$57,500

HOOVER, LINN; GEOLOGICAL REFERENCE FILE OPERATIONAL TESTING OF A COMPUTER-BASED BIBLIOGRAPHIC DATA BANK (NOOD687 004); 12 MONTHS \$420,000

AMERICAN GEOPHYSICAL UNION

SPILHAUS, A F JR; PUBLICATION OF THE ANTARCTIC RESEARCH SERIES (NO00033 004°); 12 MONTHS \$15,000

AMERICAN PSYCHOLOGICAL ASSOCIATION

LITTLE, KENNETH B; 'PSYCHOLOGICAL ABSTRACTS' PRODUCTION
SYSTEM (No00900 002): 12 MONTHS \$183 000

AMERICAN SOCIETY FOR CYBERNETICS

MURRAY, T H; JOURNAL OF CYBERNETICS (NOJ1913); 12 MONTHS \$5.500

NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL

VAN OLPHEN, B; U.S. SUPPORT OF INTERNATIONAL COMMITTEE ON DATA FOR SCIENCE AND TECHNOLOGY OF THE INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS (C110124 004); 12 MONTHS \$25,700

CLIFFE, ROBERT A; PUBLICATION AND DISTRIBUTION OF THE PROCEEDINGS OF THE THIRTEENTH GENERAL CONGRESS OF THE INSTITUTE OF REFRIGERATION (CJ10205 061\*); \$0

### HAWAII

BERNICE P BISHOP MUSEUM

FORCE, ROLAND W; PUBLICATION OF TWO PACIFIC INSECTS MONOGRAPHS (Nosessa); 4 MONTHS \$5,400

UNIVERSITY OF HAWAII

HARDY, D ELMO, AND DELFINADO, MERCEDES D; A CATALOG OF THE DIFTERA OF THE ORIENTAL REGION (NOSSIT); 24 MONTHS \$38,000 HARDY, D ELMO; PUBLICATION OF TWO MONOGRAPHS ON TEPHRITIDAE (NOSSIST\*); 12 MONTHS \$0

### **ILLUNOIS**

JOHN CRERAR LIBRARY

NOWAK, ILDIKO D; PARTIAL SUPPORT OF THE NATIONAL TRANSLA-TIONS CENTER (NGJ1994); 12 MONTHS \$91,200

#### INDIANA

UNIVERSITY OF NOTRE DAME

CROVELLO, THEODORE J; AUTOMATED DATA FILE FOR GREENE HERBARIUM BOTANICAL COLLECTION (NOCOSTO COS); 18 MONTHS \$46,200

#### MARYIAND

NONE; OTHER PROGRAM AWARDS (GIAWDS): \$169

#### MASSACHUSERTS

HARVARD UNIVERSITY

HOWELLS, WILLIAM W; PUBLICATION OF 'CRANIAL VARIATION IN MAN (NOSOSJI\*); 12 MONTHS \$0

#### MICHIGAN

UNIVERSITY OF MICHIGAN

GANS, CARL: PREPARATION OF A BIOLOGY OF THE REPTILIA' (NOSOSS), 28 MONTHS 136,000

#### MISSISSIPPI

UNIVERSITY OF MISSISSIPPI

HULL, FRANK M SR; PUBLICATION OF BEF FLIES OF THE WORLD' (NOS/171): 12 MONTHS 251.400

### NETHERLANDS

INTERNATIONAL ASSOCIATION FOR PLANT TAXONOMY

COWAN, RICHARD S; CONVERSION OF INDEX NOMINUM GENER-ICORUM DATA INTO MACHINE READABLE FORM (NOO0886 008); 12 MONTHS \$74.500

#### **NEW YORK**

AMERICAN INSTITUTE OF PHYSICS

KOCH, H WILLIAM; CURRENT PHYSICS INFORMATION SYSTEM-OPERATIONAL TESTING (NOOSES SOS); 12 MONTHS \$483,000

AMERICAN MUSEUM OF NATURAL HISTORY

ATL, JAMES N; BIBLIOGRAPHIC SERVICE IN ICHTHYOLOGY (NOOSSS 004); 12 MONTHS \$72200

DOWLING, HERNDON G, BIBLIOGRAPHIC SERVICE IN HERPETOLOGY (NOOD707 003), 12 MONTHS \$83,800

LESTER, HENRY M; RESTORATION OF DECAYING FILMS (NOCODOL): 12 MONTHS \$12.700

CORNELL UNIVERSITY

PEAKALL, DAVID B; ECOLOGICAL DATA BASE FOR ORNITHOLOGI-CAL RESEARCH (NO00859 004); 18 MONTHS \$3,600

QUEENS COLLEGE

RABEN, JOSEPH, THE PUBLICATION OF COMPUTERS AND THE HU-MANITIES, A SCHOLARLY JOURNAL (NOCOTE) 001); 12 MONTHS \$27,650

SOCIAL SCIENCE RESEARCH COUNCIL

WOOD, BRYCE; BIBLIOGRAPHY ON MODERN CHINESE SOCIETY (NOOS313 002); 28 MONTHS \$35,000

### **NORTH CAROUNA**

UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

ORNE, JERROLD: AMERICAN NATIONAL STANDARDS INSTITUTE, COMMITTEE Z39- LIBRARIES AND DOCUMENTATION (NOO0473 005); 36 MONTHS \$35,730

WRIGHTSVILLE MARINE BIOMEDICAL LABORATORY

BRAUER, RALPH W; PUBLICATION OF THE PROCEEDINGS OF THE CONFERENCE ON HIGH PRESSURE AQUARIUM SYSTEMS (NOSO411); 12 MONTHS 44,900

### OKLAHOMA

AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

PITCHER, MAX G; PUBLICATION OF THE SECOND INTERNATIONAL SYMPOSIUM ON ARCTIC GEOLOGY PROCEEDINGS (NO.1926); 12 MONTHS \$25,000

### OREGON

UNIVERSITY OF OREGON - EUGENE

ANDREWS, GEORGE F; PUBLICATION OF 'MAYA CITIES - PLACE MAKING AND URBANIZATION' (NOJ2513); 18 MONTHS \$8,500

### PENNSYLVANIA

CARNEGIE-MELLON UNIVERSITY

DANIELS, GILBERT S, PREPARATION OF BIBLIOGRAPHIA HUN-TIANA (NO00880 002); 12 MONTHS \$146,000



#### PENNSYLVANIA STATE UNIVERSITY

TRAYERSE, ALFRED; RECORDING OF TAXONOMIC, STRATIGRAPHIC, MORPHOLOGICAL AND BIBLIOGRAPHICAL DATA FOR PALYNOLOGY (NO00781 003); 6 MONTHS \$1,300

### UNIVERSITY OF PENNSYLVANIA

AJZENBERG-SELOVE, FAY: COMPILATION OF INFORMATION ON THE ENERGY LEVELS OF THE LIGHT NUCLEI (NOOOSIT); 12 MONTHS \$38,700

#### **RHODE ISLAND**

### AMERICAN MATHEMATICAL SOCIETY

WALKER, GORDON L; MATHEMATICAL OFFPRINT SERVICE (N'000887 008); 8 MONTHS \$30,000

WALKER, GORDON L; MATHEMATICAL TITLE SERVICE AND INDEX OF MATHEMATICAL PAPERS (NOO0857 003), 24 MONTHS \$102,800

#### TENNESSEE

### OAK RIDGE NATIONAL LABORATORY

LIVERMAN, JAMES L; COMPILATION OF AN ENVIRONMENTAL TER-MINGLOGY INDEX (AGOSTS); 6 MONTHS \$60,000

#### TEXAS

### UNIV OF TEXAS AT AUSTIN

DUGGAN, MICHAEL A: LEGAL ASPECTS OF INFORMATION SYSTEM AND DATA BASES (NOISEEF GOI): \$5,000

WARDLAW, FRANK H; PUBLICATION OF URBANIZATION AT TEOTIHUACAN, MEXICO, VOLUME I (NOSISSES), 54 MONTHS 40 WARDLAW, FRANK H; PUBLICATION OF 'SAN LORENZO- OLMEC

MAN AND OLMEC LAND' (NOSITIFF); 60 MONTHS 60

#### WISCONSIN

### UNIVERSITY OF WISCONSIN, MADISON

SHENEFELT, ROY D, THE BRANCONIDAE SECTION OF THE HYMENOPTERORUM CATALOGUS (NOS1925), 42 MONTHS 428,900

### FOREIGN SCIENCE INFORMATION TRANSLATIONS (DOMESTIC)

### DISTRICT OF COLUMBIA

### AMERICAN FISHERIES SOCIETY

CLEPPER, HENRY; 1971 VOLUME OF 'HYDROBIOLOGICAL JOURNAL' (NO00351 003); 12 MONTHS \$22,800

CLEPPER, HENRY; 1971 VOLUME OF 'PROBLEMS OF ICHTHYOLOGY' (NO00855 001); 18 MONTHS \$32,200

### AMERICAN GEOLOGICAL INSTITUTE

HOOVER, LINN; TRANSLATION, PUBLICATION AND DISTRIBUTION OF FOUR RUSSIAN SCIENTIFIC JOURNALS, 1972 VOLUMES (NOODRIG 002); 12 MONTHS \$32,700

### AMERICAN GEOPHYSICAL UNION

SPILHAUS, A F JR; TRANSLATION, PUBLICATION AND DISTRIBUTION OF FOUR RUSSIAN SCIENTIFIC JOURNALS, 1972 VOLUMES (NOOOBED 001); 12 MONTHS \$43,400

### MARYLAND

### ENTOMOLOGICAL SOCIETY OF AMERICA

MURDOCH, WALLACE P; 1972 VOLUME OF ENTOMOLOGICAL REVIEW (NGO0858 004): 12 MONTHS \$9,700

# FOREIGN SCIENCE INFORMATION TRANSLATIONS (SPECIAL FOREIGN CURRENCY)

### INDIA

### AMERIND PUBLISHING COMPANY LTD

PRIMLANI, MOHAN; CONTRACT FOR THE TRANSLATION, EDITING, PRINTING, BINDING, AND BULK SHIPMENT OF FOREIGN SCIENTIFIC LITERATURE IN OTHER COUNTRIES (C880000 001); \$100,000

PRIMLANI, MOHAN; PROCESS IN ENGLISH FOREIGN SCIENTIFIC AND TECHNOLOGICAL INFORMATION (C 20000 007); \$17,000

### INDIAN NATIONAL SCIENTIFIC DOCUMENTATION CTR

PARTHASARATHY, S; PROCESS IN ENGLISH FOREIGN SCIENTIFIC AND TECHNOLOGICAL INFORMATION (C466000 atr); \$100,000

### ISRAEL

### ISBABL PROGRAM FOR SCIENTIFIC TRANSLATIONS

RISCHIN, YITZAK; PROCESS IN ENGLISH FOREIGN SCIENTIFIC AND TECHNOLOGICAL INFORMATION (CS03000 013); \$83,000

### NEW YORK

### FRANKLIN BOOK PROGRAMS INC

KYLE, JOHN H; SCIENTIFIC AND TECHNICAL INFORMATION PROCESSING AND TRANSLATIONS UAR (C71,000), 36 MONTHS \$100,000

### PAKISTAN

SAAD, ISMAIL; PROCESS IN ENGLISH FOREIGN SCIENTIFIC AND TECHNOLOGICAL INFORMATION (C\$05000 010): \$50,000

#### POLANO

### CENTRAL INST FOR SCIENTIFIC TECH & ECON INFO

BREDA, MIECZYSLAW, PROCESS IN ENGLISH FOREIGN SCIENTIFIC TECHNOLOGICAL INFORMATION (C501000 013); \$200,000 SYGITOWICZ, J; PROCESS IN ENGLISH FOREIGN SCIENTIFIC

TECHNOLOGICAL INFORMATION (CS01000 018); \$100,000

#### TUNISIA

### AGENCE TUNISIENNE DE PUBLIC RELATIONS

AZZOUZ, AZZEDINE: PROCESS IN ENGLISH FOREIGN SCIENTIFIC TECHNOLOGICAL INFORMATION (C504000 014); \$25,000 AZZOUZ, AZZEDINE: PROCESS IN ENGLISH FOREIGN SCIENTIFIC TECHNOLOGICAL INFORMATION (C504000 014); \$15,000

#### YUGOSLAYIA

#### NOLIT PUBLISHING HOUSE

LAZAREVIC, SAVA; PROCESS IN ENGLISH FOREIGN SCIENTIFIC TECHNOLOGICAL INFORMATION (CSORODO 013); \$150,000

### FOREIGN SCIENCE SERVICES AND PUBLICATIONS

### DISTRICT OF COLUMBIA

### CENTER FOR APPLIED LINGUISTICS

ROBERTS, A HOOD; SUPPORT OF THE LINGUISTICS COMMITTEE OF THE INTERNATIONAL FEDERATION FOR DOCUMENTATION (NOISE86 001); 12 MONTHS \$12,700

### NATIONAL ACADEMY OF SCIENCES

ROWAN, EDMUND C; TASK ORDER FOR PREPARATION FOR U.S. PAR-TICIPATION IN THE UNISIST INTERGOVERNMENTAL CONFERENCE (CJ10810 001); I MONTHS \$1,600

COLEMAN, JOHN S; INTERNATIONAL COUNCIL OF SCIENTIFIC UNION ABSTRACTING BOARD (CJ10234); 12 MONTHS \$10,000

### NATIONAL TECHNICAL INFORMATION SERVICE

KNOX, WILLIAM T; OPERATIONAL SUPPORT FOR THE NATIONAL SCIENCE FOUNDATION'S SPECIAL FOREIGN CURRENCY PROGRAM (CAJJ000 004): 12 MONTHS \$87,850

NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL

ROWAN, EDMUND C: SUPPORT OF THE U.S. NATIONAL COMMITTEE FOR THE INTERNATIONAL FADERATION FOR DOCUMENTATION (FID) (CJ1004) 013): 9 MONTHS \$42,540

### MASSACHUSETTS

### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

LOCKE, WILLIAM N: STUDY INTO THE DISSEMINATION OF SCIENTIFIC AND TECHNICAL INFORMATION IN THE U.S.R. (NOOGIEL 004): 12 MONTHS \$16,055

### SCIENCE INFORMATION RESEARCH

### RESEARCH AND STUDIES

### CAUFORNIA

### UNIVERSITY OF CALIFORNIA, BERKELEY

MARON, M E; LOGICAL FOUNDATIONS OF INFORMATION RETRIEVAL (Noisess): 24 MONTHS \$47,900

### UNIVERSITY OF SOUTHERN CALIFORNIA

KAPRIELIAN, ZOHRAB A, AND CHRISTY, ROBERT F; AN ANALYSIS OF POTENTIAL BENEFITS THROUGH SHARING OF LIBRARY RESOURCES-CALTECH, UCLA, USC (NOSJOIO); 24 MONTHS \$126,500

### COLORADO

### UNIVERSITY OF DENVER-DENVER RESEARCH INSTITUTE

ROBBINS, MARTIN D. AN EXAMINATION OF THE EXTENT AND IM-PACT OF NEWLY EMERGING SCIENTIFIC AND TECHNICAL INFORMA-TION SERVICES (NGJ2880), 12 MONTHS \$68,900

### CONNECTICUT

### YALE UNIVERSITY

PRICE, DEREK J DE SOLLA; NTATISTICAL STUDIES OF CITATION AND OTHER CHARACTERISTICS OF THE WORLD'S SCIENTIFIC LITERATURE (NOOSTI 001); 22 MONTHS \$11,600



### GEORGIA

### GEORGIA INSTITUTE OF TECHNOLOGY

SLANECKA, VLADIMIR; GEORGIA INSTITUTE OF TECHNOLOGY, SCIENCE INFORMATION RESEARCH CENTER (NOO0655 001); \$170,000

WARE, GLENN O; A SIMULATION STUDY OF AN INFORMATION DIS-SEMINATION CENTER NETWORK (NOSERIA); 12 MONTHS \$97,900

### ILLINOIS

### IIT RESEARCH INSTITUTE

WILLIAMS, MARTHA E, AND SCHIPMA, PETER B; DESIGN AND SPECIFICATIONS FOR MANIPULATING LARGE DATA BASES (C114000): 12 MONTHS \$169,000

### INDIANA

### PURDUE UNIVERSITY

TOULOUKIAN, Y S; DEVELOPMENT OF A COMPUTERIZED SYSTEM OF CROSS-FILE SEARCH OF EXTENSIVE COMPLEX DATA BANKS ON NUMERICAL DATA OF PHYSICAL CONSTANTS (NOJ2111); 24 MONTHS 296 200

### MARYLAND

### GENERAL ELECTRIC COMPANY-INFORMATION SYSTEMS OFFICE

; DESIGN OF A PROGRAM FOR GATHERING DATA ON THE UTILITY OF INDEXES (C418000 001); 12 MONTHS \$1,843; AN INVESTIGATION OF BASIC PROCESSES INVOLVED IN THE MANUAL INDEXING OF SCIENTIFIC DOCUMENTS (C48000 008); 11 **MONTHS \$1,328** 

### NEW YORK

### SYRACUSE UNIVERSITY

DOUGHERTY, RICHARD M: AN INVESTIGATION OF CAMPUS LIBRARY ORGANIZATIONAL STRUCTURE (NOJEJSI); 12 MONTHS \$33,800

### PENNSYLVANIA

### DREXEL UNIVERSITY

GRIFFITH, BELVER C; SCIENTIFIC AND TECHNICAL PERIODICALS PUBLISHED BY PRIVATE INDUSTRY (NOSEISE); 12 MONTHS \$71,700

LEIBOWITZ, MICHAEL B; THE APPLICABILITY OF LEADERMARI
TEXT-PROCESSING TO THE U.S. PATENT OFFICE COMPUTER AIDEL CLASSIFICATION PROJECT (Nojetoo): 12 MONTHS \$14,970



# SCIENCE EDUCATION SUPPORT

### STUDENT DEVELOPMENT

### PRE-COLLEGE LEVEL

### ARIZONA

NORTHERN ARIZONA UNIVERSITY

SEAMAN, P DAVID; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007349); 10 MONTHS \$13,480

#### ARKANSAS

UNIVERSITY OF ARKANSAS

ANDERSON, RICHARD J; STUBENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007313); IS MONTHS \$13,211

#### CALIFORNIA

CALIFORNIA STATE COLLEGE AT BAKERSFIELD

FANG, FABIAN T: STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007598), 10 MONTHS \$10,367

CALIFORNIA STATE UNIVERSITY, HUMBOLDT

BUTLER, JOHN E: STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007515); 10 MONTHS \$27.921

CALIFORNIA STATE UNIVERSITY, SAN DIEGO

DEATON, EDMUND I; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007521); 10 MONTHS \$19,658

SPANGLER, JOHN A; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007342): 10 MONTHS \$17,470

COMMITTEE FOR ADVANCED SCIENCE TRAINING

MCKEE, RALPH W: STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (WOOTS90): 10 MONTHS \$3204

HARVEY MUDD COLLEGE

BELL, GRAYDON: STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W00739J): 10 MONTHS \$15,971

SALK INSTITUTE FOR BIOLOGICAL STUDIES

HYMAN, ROBERT: STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007540); 10 MONTHS 42,200

STANFORD UNIVERSITY

COLEMAN, ERNEST; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007367); 10 MONTHS \$2,452

UNIVERSITY OF CALIFORNIA, BERKELEY

PORTIS, ALAN M; CENTER OF EXCELLENCE IN SCIENCE EDUCA-TION (WOOGS12 001\*); 14 MONTHS \$15,000

WOLF, FRANTISEK; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007585); 10 MONTHS \$16,237

UNIVERSITY OF SOUTHERN CALIFORNIA

MERZ, ROBERT C: STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007543); 10 MONTHS \$15,062

UNIVERSITY OF CALIFORNIA, SAN DIEGO-SCRIPPS INSTITUTION OF OCEANOGRAPHY

CLICQUENNOI, ROBERT L; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007619); 8 MONTHS \$24,895

### COLORADO

COLORADO SCHOOL OF MINES

BURNETT, JERROLD J; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W0075J8); 10 MONTHS \$26,035

UNIVERSITY OF COLORADO

LVES, JACK D; STUDENT SCIENCE TRAINING PROGRAM (PRE-COL-LEGE) (W0075/4): 10 MONTHS \$9,999

### CONNECTICUT

WESLEYAN UNIVERSITY

GAUTHIER, JOSEPH J; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007538); 10 MONTHS \$20,039

#### DISTRICT OF COLUMBIA

NONE; OTHER PROGRAM AWARDS (##AWDS); \$13,743

AMERICAN UNIVERSITY

SCHUBERT, LEO: STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007514); 10 MONTHS \$11.157

EXOTECH SYSTEMS INC.

EHRMAN, L; TASK ORDER FOR DATA PROCESSING AND TABULA-TION OF STUDENT PARTICIPANT DATA FOR 1876 AND 1871 SSTP AND SUPPLEMENTARY PROGRAMS (C453018); B MONTHS \$29,970

FEDERAL CITY COLLEGE

SAVITZ, MAXINE L; SCIENCE MOBILE LABORATORY PROJECT FOR DISTRICT OF COLUMBIA SCHOOLS AND COMMUNITY (W006449 001\*); 18 MONTHS \$67,424

NATIONAL SCIENCE TEACHERS ASSOCIATION

KIZER, FRANKLIN D; SEVEN REGIONAL CONFERENCES! ON SCIENCE EDUCATION IN THE ELEMENTARY AND SECONDARY SCHOOLS OF THE NATION (W006809\*); 12 MONTHS \$1,100

### FLÓRIDA

FLORIDA ATLANTIC UNIVERSITY

DELEON, M J; STUDENT SCIENCE TRAINING PROGRAM (PRE-COL-LEGE) (W007565); 10 MONTHS \$17,120

FLORIDA STATE UNIVERSITY

BARNES, LEHMAN W; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007544); 10 MONTHS \$18,286

### GEORGIA

**EMORY UNIVERSITY** 

NEFF, MARY F; STUDENT SCIENCE TRAINING PROGRAM (PRE-COL-LEGE) (W007541); 10 MONTHS \$10,470

**FERNBANK SCIENCE CENTER** 

KNAPPENBERGER, PAUL H: STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W001612): 10 MONTHS 49,856

GEORGIA STATE UNIVERSITY

SEARS JR, CURTIS T. STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007550), 10 MONTHS \$11,989

MORRIS BROWN COLLEGE

PAYNE, W F; STUDENT SCIENCE TRAINING PROGRAM (PRE-COL-LEGE) (W007603); 10 NONTHS \$17,910

### IDAHO

COLLEGE OF IDAHO

SCHATZ, BRUCE S; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007588); 10 MONTHS 48,572

UNIVERSITY OF IDAHO

JOHNSTON, LAWRENCE H; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007541); 10 MONTHS \$22,892

### ILLINOIS

ELMHURST COLLEGE

HOLLIDAY, T B: STUDENT SCIENCE TRAINING PROGRAM (PRE-COL-LEGE) (W007556): 10 MONTHS \$6,440



### FIELD MUSEUM OF NATURAL HISTORY

SMITH, HARRIET M: STUDENT SCIENCE TRAINING PROGRAM IPRE-COLLEGE) (W007531); 10 MONTHS \$9,138

### NATIONAL MERIT SCHOLARSHIP CORPORATION

STALNAKER, JOHN M; CONTRACT FOR SELECTIONITHE 1978 PRE-SIDENTS AUSTRAL SCIENCE SCHOLARS (C801000 001); 12 MONTHS \$1,500

### NORTHERN ILLINOIS UNIVERSITY

SPANGLER, CHARLES W: STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007594); 10 MONTHS \$18,828

### UNIVERSITY OF ILLINOIS AT URBANA

DOBROYOLNY, JERRY 8; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007348); 10 MONTHS \$21204

### CHICAGO PARK DISTRICT-ADLER PLANETARIUM

HYNEK, J ALLEN; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007518): 18 MONTHS \$16.147

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### INDIANA UNIVERSITY, BLOOMINGTON

MCBURNEY, WENDELL F; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007547); 10 MONTHS 434,194

### PURDUE UNIVERSITY

ABERLE, ELTON D; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W001529); 10 MONTHS \$28,450

#### **IOWA**

### LUTHER COLLEGE

TJOSTEM, JOHN L: STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007c81); 10 MONTHS \$11,162

### WARTBURG COLLEGE

HERTEL, ELMER W; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007346); 10 MONTHS \$9.565

#### KANSAS

### Kansas state teachers college of emporia

CRAM, S WINSTON; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W001505), 10 MONTHS \$12,954

#### KENTUCKY

#### ASBURY COLLEGE

RAY, J PAUL; STUDENT SCIENCE TRAINING PROGRAM (PRE-COL-LEGE: (W007511): 10 MONTHS \$27,625

### CENTRE COLLEGE OF KENTUCKY

SAGAR, WILLIAM C; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (WOOTSID); 10 MONTHS \$7,052

### THOMAS MORE COLLEGE

MUELLER, MARY CASIMIRA; STUDENT SCIENCE TRAINING PRO-GRAM (PRE-COLLEGE) (W007360); 10 MONTHS \$13,150

### LOUISIANA

## LOUISIANA STATE UNIVERSITY, BATON ROUGE

BENNETT, HARRY J. STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W00759):: 10 MONTHS \$15,757

### LOUISIANA TECH UNIVERSITY

CHRISTIAN, JAMES A; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W00:7580); 10 MONTHS \$15,840

### LOYOLA UNIVERSITY

CHRISTMAN, JOHN F; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007519): 10 MONTHS \$29,651

### NORTHWESTERN STATE UNIVERSITY OF LOUISIANA

BURNS, THOMAS A: STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007351); 10 MONTHS \$13,262

### SOUTHERN UNIVERSITY

SPIKES, DOLORES B; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (#1007574); 10 MONTHS \$17,352

# LOUISIANA STATE UNIVERSITY, BATON ROUGE-AGRICULTURAL EXPERIMENT STATION

WELLS, DARTHON V. STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007555): 10 MONTHS \$35,179

### MAINE

### JACKSON LABORATORY

WAYMOUTH, CHARITY; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007506): 10 MONTHS \$19,313

### MARYLAND

NONE; OTHER PROGRAM AWARDS (01AWDS); \$1,912

### MASSACHUSETTS

### HAMPSHIRE COLLEGE

KELLY, DAVID C; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007559); 10 MONTHS \$28,872

### **MICHIGAN**

### MICHIGAN STATE UNIVERSITY

PEEBLES, CHARLES R; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007539); 10 MONTHS \$28,037

MELTZ, DAVID; STUDENT SCIENCE TRAINING PROGRAM (PRE-COL-LEGE) (W007547); 10 MONTHS \$11,850

### UNIVERSITY OF DETROIT

WEMPLE, JAMES; STUDENT SCIENCE TRAINING PROGRAM (FRE-COLLEGE) (Wootsdd): 10 MONTHS \$2.912

### WAYNE STATE UNIVERSITY

SAPERSTEIN, ALVIN M; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W001518); 10 MONTHS \$27.242

### WESTERN MICHIGAN UNIVERSITY

KENT, NEIL D; STUDENT SCIENCE TRAINING PROGRAM (PRE-COL-LEGE) (W007563); 10 MONTHS \$35.754

MALLINSON, GEORGE C: STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007370); 10 MONTHS \$25,478

#### MINNESOTA

### 8T OLAF COLLEGE

GERY, FRANK W; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W00754); 10 MONTHS \$18,827

### UNIVERSITY OF MINNESOTA

MORAN, JOHN P; STUDENT SCIENCE TRAINING PROGRAM (PRE-COL-LEGE) (W007608); 19 MONTHS \$24,960

### UNIVERSITY OF MINNESOTA-MEDICAL SCHOOL

HALBERG, FRANZ; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W001613): 18 MONTHS \$16,081

### MISSISSIPPI

### RUST COLLEGE

AHUJA, AVTAR S; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007603); 10 MONTHS \$21,123

### MISSOURI

### ACADEMY OF SCIENCE OF ST LOUIS

BRAZIER, DONN P; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007606); 21 MONTHS \$9,976

### NEBRASKA

### NEBRASKA WESLEYAN UNIVERSITY

LAURSEN, PAUL H; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007557); 10 MONTHS \$18,287

### NEVADA

### FORESTA INST FOR OCEAN & MOUNTAIN STUDIES

MILLER, RICHARD GORDON, STUDENT SCIENCE TRAINING PRO-GRAM (PRE-COLLEGE) (W007584): 10 MONTHS \$18,542

### NEW JERSEY

### NEWARK COLLEGE OF ENGINEERING

DEUTSCHMAN, HAROLD: STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007577): 10 MONTHS \$11,645

### RIDER COLLEGE

SHEATS, JOHN E; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007513): 10 MONTHS \$11,116

### RUTGERS UNIVERSITY

GREITZER, SAMUEL L; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W001510); 10 MONTHS \$19,783

### STEVENS INSTITUTE OF TECHNOLOGY

WHITE, MYRON E; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007582): 10 MONTHS \$26,165

### **NEW MEXICO**

### EASTERN NEW MEXICO UNIVERSITY

GENNARO, A L; STUDENT SCIENCE TRAINING PROGRAM (PRE-COL-LEGE) (W007553): 10 MONTHS \$12,890

### NEW MEXICO STATE UNIVERSITY

LUCKY, GEORGE W; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007609); 18 MONTHS \$12,089



#### **NEW YORK**

BOYCE THOMPSON INST FOR PLANT RESEARCH INC

APP, ALVA A; STUDENT SCIENCE TRAINING PROGRAM (PRE-COL-LEGE) (W001508): 10 MONTHS \$1,861

CLARKSON COLLEGE OF TECHNOLOGY

PARTCH, RICHARD; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007537); 10 MONTHS \$2,858

COLUMBIA UNIVERSITY

BACHS, ALLAN M; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W001579); 18 MONTHS \$35,000

CORNELL UNIVERSITY

RICHARDSON, ROBERT C; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W006366 001); \$300

RICHARDSON, ROBERT C; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007348); 10 MONTHS \$12,854

POLYTECHNIC INSTITUTE OF BROOKLYN

RABINS, MICHAEL; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (WOO7368); 10 MONTHS \$14,663

ZIEGLER, EDWARD N. STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W001313): 10 MONTHS \$11,863

STATE UNIVERSITY AT STONY BROOK

SPROUSE, GENE D; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007514); 10 MONTHS \$2,566

WALDEMAR MEDICAL RESEARCH FOUNDATION

GROSS, LEO; STUDENT SCIENCE TRAINING PROGRAM (PRE-COL-LEGE) (W007511): 10 MONTHS \$20,358

HEALTH RESEARCH INC-ROSWELL PARK DIVISION

MIRAND, EDWIN A; STUDENT SCIENCE TRAINING PROGRAM (W004004 001"); \$994

MIRAND, EDWIN A; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (WOOTSOP); 10 MONTHS \$23,056

### **NORTH CAROLINA**

BENNETT COLLEGE

SAYLES, J HENRY; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007604); 10 MONTHS 426,400

EAST CAROLINA UNIVERSITY

PIGNANI, TULLIO J; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (#007517): 17 MONTHS \$10,369

WESTERN CAROLINA UNIVERSITY

DODSON, JOSEPH W; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007554); 10 MONTHS \$16,670

### NORTH DAKOTA

NORTH DAKOTA STATE UNIVERSITY

GARVEY, ROY G: STUDENT SCIENCE TRAINING PROGRAM (PRE-COL-LEGE) (W00744); 10 MONTHS \$8287

### OHIO

CASE WESTERN RESERVE UNIVERSITY

LANDO, JEROME B; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (WO0758J): 10 MONTHS \$7,120

CENTRAL STATE UNIVERSITY

SCHLUETER, ALBERT W: STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007374); 10 MONTHS \$17206

NOTRE DAME COLLEGE

DECHANT, SR M JEANMARIE; STUDENT SCIENCE TRAINING PRO-GRAM (PRE-COLLEGE) (W007125); 18 MONTHS \$15,696

OHIO STATE UNIVERSITY

YARRINGTON, PAUL T; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W006679 001); 11 MONTHS \$300

ROSS, ARNOLD E; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007340); 10 MONTHS \$41,196

SMITH, LESTER F; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007596): 10 MONTHS 418,229

UNIVERSITY OF DAYTON

BOEHMAN, LOUIS I; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007597); 10 MONTHS \$10,161

XAVIER UNIVERSITY

TOEPKER, TERRENCE P; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007602): 10 MONTHS \$7,910

### OKLAHOMA

UNIVERSITY OF OXLAHOMA

STEINBRINK, JOHN E: STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007541): 10 MONTHS \$8,980

### OREGON

oregon museum of science and industry

WHITNEY JR, HARTWELL H; STUDENT SCIENCE TRAINING PRO-GRAM (PRE-COLLEGE) (W007589): 18 MONTHS \$14,000

### PENNSYLVANIA

CLARION STATE COLLEGE

KONITZKY, GUSTAV A; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007578); 10 MONTHS \$7,482

HAHNEMANN MEDICAL COLLEGE AND HOSPITAL

SATINSKY, VICTOR P. STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W001580); 18 MONTHS \$34,215

LEHIGH UNIVERSITY

WILANSKY, A; STUDENT SCIENCE TRAINING PROGRAM (PRE-COL-LEGE) (W007515); 10 MONTHS \$14,262

MARINE SCIENCE CONSORTIUM

OOSTDAM, B L; STUDENT SCIENCE TRAINING PROGRAM (PRE-COL-LEGE) (W007587); 10 MONTHS \$15,832

UNIVERSITY OF PITTSBURGH

STOEHR, R. A. STUDENT SCIENCE TRAINING PROGRAM (PRE-COL-LEGE) (W007316): 10 MONTHS \$6,825

#### RHODE ISLAND

UNIVERSITY OF RHODE ISLAND

CROASDALE, WILLIAM; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007595); 10 MONTHS \$13,258

### SOUTH CAROLINA.

CLEMSON UNIVERSITY

BAXTER JR, L W; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007518); 10 MONTHS \$12,980

UNIVERSITY OF SOUTH CAROLINA

ZINGMARK, RICHARD G; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007381); 10 MONTHS \$14,751

### TENNESSEE

CARSON-NEWMAN COLLEGE

NAYLOR, GERALD W; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007616): 10 MONTHS \$17,845

CHRISTIAN BROTHERS COLLEGE

DOODY, EDWARD; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007586); 10 MONTHS \$17,017

DAVID LIPSCOMB COLLEGE

WALDEN, GEORGE E; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007614); 10 MONTHS \$16,640

TENNESSEE TECHNOLOGICAL UNIVERSITY

MARTIN, ROBERT E; TECH AQUA PROJECT (YOUTETS 001\*); \$25,000

UNIVERSITY OF THE SOUTH

PEYSER, CHARLES S; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W00:601); 10 MONTHS \$8,188

### TEXAS

BAYLOR UNIVERSITY

SCHWETMAN, HERBERT D; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLI.EGE) (W007614); 10 MONTHS 46,046

TEXAS A & M UNIVERSITY

FIFE, WILLIAM P; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007588); 10 MONTHS \$13,7:9

TEXAS ASSN FOR GRADUATE EDUCATION & RESEARCH

PIERCE, JACK R; STUDENT SCIENCE TRAINING PROGRAM (PRE-COL-LEGE) (W007807); 10 MONTHS \$35,818

UNIV OF TEXAS AT AUSTIN

SPEAR, IRWIN; STUDENT SCIENCE TRAINING PROGRAM (PRE-COL-LEGE) (W007544); 10 MONTHS \$20,181

### UTAH

UNIVERSITY OF UTAH

DAVIS, E ALLAN; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007554) 18 MONTHS \$25,284

UTAH STATE UNIVERSITY

CANNON, LAWRENCE O; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007534); 10 MONTHS \$16,398

### VERMONT

PENNINGTON COLLEGE

VAN DERLINDE, REINHOUD H; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007507); 10 MONTHS \$22,270



### VIRGINIA

COLLEGE OF WILLIAM AND MARY

FUNSTEN, HERBERT O; STUDENT SCIENCE TRAINING PROGRAM IPRE-COLLEGE) (W007800); 10 MONTHS \$2,664

#### WASHINGTON

FOUNDATION FOR GLACIER AND ENVIRONMENTAL RES

MILLER, MAYNARD M; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (WOO7546); 10 MONTHS \$6.160

UNIVERSITY OF WASHINGTON

JAYNE, BENJAMIN A: STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007598); 10 MONTHS \$16,000

WHITMAN COLLEGE

KEISER JR, VICTOR H, STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007533), 10 MONTHS \$12,645

### WEST VIRGINIA

WEST YIRGINIA UNIVERSITY

KELLER JR, E C; STUDENT SCIENCE TRAINING PROGRAM (PRE-COL-LEGE) (W007681); 10 MONTHS \$12,322

WHERLING COLLEGE

LONER, CHARLES J; STUDENT SCIENCE TRAINING FROGRAM (PRE-COLLEGE) (W007370); 18 MONTHS \$3.398

#### WISCONSIN

UNIVERSITY OF WISCONSIN, MADISON

MAXWELL, GEORGE M; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007411); 10 MONTHS \$10,913

WISCONSIN STATE UNIVERSITY, LA CROSSE

ARORA, MANMOHAN S; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007815); 10 MONTHS \$17,803

WISCONSIN STATE UNIVERSITY, SUPERIOR

DICKAS, ALBERT B; STUDENT SCIENCE TRAINING PROGRAM (PRE-COLLEGE) (W007617); 10 MONTHS \$18,127

### UNDERGRADUATE LEVEL

### ALABAMA

ALABAMA AGRICULTURAL AND MECHANICAL UNIVERSITY

RIGGINS, LEE SHEFTON; EVALUATION OF RURAL WATER SUPPLIES IN NORTH ALABAMA (Y008615); 12 MONTHS \$10,350

TUSKEGEE INSTITUTE

SAINI, RAJINDER S; UNDERGRADUATE RESEARCH PARTICIPATION (Y009821); 11 MONTHS \$11,810

UNIVERSITY OF ALABAMA IN BIRMINGHAM

PEARSON, COLIN A; UNDERGRADUATE RESEARCH PARTICIPATION (YOUPPIO); 11 MONTHS \$14,080

UNIVERSITY OF ALABAMA, TUSCALOGSA

ALBRIGHT JR. RONALD G; PESTICIDE DISTRIBUTION IN A TYPICAL SOUTHEASTERN REGION (Y009591); 12 MONTHS \$18,780

### ALASKA

UNIVERSITY OF ALASKA

HOSKINS, L CLARON; UNDERGRADUATE RESEARCH PARTICIPA-TION (YO10016): 11 MONTHS \$5,670

### ARIZONA

ARIZONA STATE UNIVERSITY

REISER, CASTLE O; UNDERGRADUATE RESEARCH PARTICIPATION (Y010007); 11 MONTHS \$11,630

UNIVERSITY OF ARIZONA

MULLER, ANTHONY B; STUDENT-ORIGINATED STUDIES (Y009571); 12 MONTHS \$10,010

SEMELSBERGER, ROBERT G: SULFUR DIOXIDE-SULFATE SMELTER EMISSIONS IN THE SAN MANUEL-TUCSON BASIN (Y009696); 12 MONTHS \$15,950

### ARKANSAS

UNIVERSITY OF ARKANSAS

MOOSE, MICHAEL; THE MOBILE HOME SYNDROME- ITS PROGNOSIS, DIAGNOSIS, AND PRESCRIPTION (Y009614); 12 MONTHS \$13,240
YEARGAN, J B; UNDERGRADUATE RESEARCH PARTICIPATION

(YOOSSO): 11 MONTHS \$9,600

SIMS, LESLIE B; UNDERGRADUATE RESEARCH PARTICIPATION (Y010017); 11 MONTHS \$16,410

#### CALIFORNIA

CALIFORNIA ACADEMY OF SCIENCES

SHAW, EVELYN; UNDERGRADUATE RESEARCH PARTICIPATION (Y000911); 11 MONTHS \$10,020

CALIFORNIA INSTITUTE OF TECHNOLOGY

DEAN, RICHARD A; UNDERGRADUATE RESEARCH PARTICIPATION (Y009756); 11 MONTHS \$10,760

BEAUCHAMP, JESSE LEE; UNDERGRADUATE RESEARCH PAR-TICIPATION (Y000164); 11 MONTHS \$18,750

CLARK, DONALD S; UNDERGRADUATE RESEARCH PARTICIPATION (YOU9788); 11 MONTHS \$11,510

SINSHEIMER, ROBERT L; UNDERGRADUATE RESEARCH PARTICIPA-TION (1909880); 11 MONTHS \$28,380

CALIFORNIA STATE COLLEGE AT BAKERSPIELD

STARBUCK JR, EDWIN R: AIR POLLUTION AND ITS RELATION TO LUNG DISORDERS (YOODGAD), 12 MONTHS \$19,940

CALIFORNIA STATE COLLEGE AT SONOMA

SERPA, LAWRENCE E: THE IMPACT OF BACKPACKERS ON THE SIERRA NEVADA (1909690): 12 MONTHS 88,610

California State University, Fresho

KAUFFMAN, GEORGE B; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y069916); IL MONTHS \$15850

CALIFORNIA STATE UNIVERSITY, LOS ANGELES

BROWN, COSTELLO L; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009913); \$16,200

BROWN, COSTELLO L; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009815 Oct); \$900

California State University, Sacramento

NEWCOMB, CHARLES P. UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009816); 11 MONTHS \$5,030

CALIFORNIA STATE UNIVERSITY, SAN DIEGO

WALBA, HAROLD; UNDERGRADUATE RESEARCH PARTICIPATION (Y009733): 11 MONTHS \$20.170

HILLIX, WILLIAM A; UNDERGRADUATE RESEARCH PARTICIPATION (Y009917); 11 MONTHS \$14270

CALIFORNIA STATE UNIVERSITY, SAN JOSE

KIRMEYER, SANDRA; SOCIAL, PSYCHOLOGICAL AND ENVIRONMENTAL FACTORS AFFECTING ATTITUDES TOWARD PARENT 100D (Y009375); 12 MONTHS \$17.910

HENRY, DIANA GALE; IMPACT OF HUMAN ACTIVITY ON HENRY W. COE STATE PARK (Y009674); 12 MONTHS \$16,670

CALIFORNIA STATE UNIVERSITY, SAN LUIS OBIS PO

LANE, JOHN R; LAND OWNERSHIP AND PLANNING TECHNIQUES (Y009638); 12 MONTHS \$11,630

HARVEY MUDD COLLEGE

KUBOTA, MITSURU: UNDERGRADUATE RESEARCH PARTICIPATION (Y009760); 11 MONTHS \$9,000

GREEVER, JOHN; UNDERGRADUATE RESEARCH PARTICIPATION (Y009918); 11 MONTHS \$10,300

IMMACULATE HEART COLLEGE

GREEN, SR AGNES ANN; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009919); 11 MONTHS \$7,330

MOUNT ST MARYOS COLLEGE

BUNDY, HALLIE F; UNDERGRADUATE RESEARCH PARTICIPATION (Y009920); 11 MONTHS \$4,000

OCCIDENTAL COLLEGE

MCADAM, DOUG; POWER STRUCTURE IN AN INTERRACIAL FRINGE COMMUNITY (Y009655); 12 MONTHS \$11,280

DEHAAN, FRANK P; UNDERGRADUATE RESEARCH PARTICIPATION (Y009881); 11 MONTHS \$8,000

POMONA COLLEGE

FASS, RICHARD A; UNDERGRADUATE RESEARCH PARTICIPATION (Y009778); 11 MONTHS \$7,650

STANFORD UNIVERSITY

RILEY, WILLIAM M; SHORT-TERM HEALTH EFFECTS OF AIR POLLU-TION (Y000854); 12 MONTHS \$12,790

KEUSINK, CHRISTOPHER; EFFECTS OF CALIFACTION ON SUB-TIDAL AND INTER-TIDAL COMMUNITIES PHASE I (Y009656); 12 MONTHS \$10,200

UNIVERSITY OF CALIFORNIA, BERKELEY

HAND, CADET; UNDERGRADUATE RESEARCH PARTICIPATION (Y009815); 11 MONTHS \$9,750

UNIVERSITY OF CALIFORNIA, IRVINE

HEALEY, PATRICK 1; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y010031); 11 MONTHS \$22,530



### UNIVERSITY OF CALIFORNIA, LOS ANGELES

KNOBLER, CHARLES M; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009760); 11 MONTHS \$31,200

RITTENBERG, S C; UNDERGRADUATE RESEARCH PARTICIPATION (Y00991); 11 MONTHS \$12,200

## University of California, riverside

SIEH, KERRY; THE SOCIOLOGICAL AND ECONOMIC IMPACT OF SAN JACINTO FAULT SYSTEM (Y009887); 12 MONTHS \$24.570

CARTER, LEWIS F; UNDERGRADUATE RESEARCH PARTICIPATION (YOUTH), 11 MONTHS \$15,520

SHANNON, LELAND M; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009921); 11 MONTHS \$14.240

## University of California, San Diego

ATKINSON, WILLIAM D; COMPUTER ANIMATION OF AIR POLLUTION (Y008584); 12 MONTHS \$16,990

## University of California, Santa Barbara

LEW. BARCLAY; CRIMINAL ACTIVITY AND ALLOCATION OF POLICE MANPOWER IN SANTA BARBARA (Y009577); 12 MONTHS \$1,220

#### UNIVERSITY OF REDLANDS

ROBERTS, JULIAN L: UNDERGRADUATE RESEARCH PARTICIPATION (Y009791): 11 MONTHS \$5,120

### UNIVERSITY OF SANTA CLARA

DE BOUVERE, KAREL L; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009949); 11 MONTHS \$10,630

### UNIVERSITY OF THE PACIFIC

VAN BUSKIRK, MARY ANNE; CAUSES AND EFFECTS OF CULTURAL EUTROPHICATION OF BLUE LAKE (Y009639); 12 MONTHS \$13,060

#### COLORADO

### COLORADO STATE UNIVERSITY

BOTTOMS, KENNETH E; ENVIRONMENTAL MANAGEMENT AL TERNA-TIVES FOR FIVE LEVELS OF LAND USE (Y000032); 12 MONTHS \$15,940

### UNIVERSITY OF COLORADO

IVES, JACK D: UNDERGRADUATE RESEARCH PARTICIPATION (Y00979J); 11 MONTHS \$15,420

ASHBY, NEIL; UNDERGRADUATE RESEARCH PARTICIPATION (Y003818); II MONTHS \$13,100

#### UNIVERSITY OF DENVER

BRANDOM, WILLIAM F; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009917); 11 MONTHS \$12,440

CORTESE, CHARLES F; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009959), 11 MONTHS \$15,200

### WESTERN INTERSTATE COMM FOR HIGHER EDUCATION

HULLINGHORST. ROBERT S; RESOURCES DEVELOPMENT INTERN-SHIP PROGRAM (Y009JJ4\*); 16 MONTHS \$18,225

### UNIVERSITY OF COLORADO-DENYER CENTER

HOVEY III, GEORGE L; STUDENT-ORIGINATED STUDIES (Y009564); 12 MONTHS \$16,050

### CONNECTICUT

### CONNECTICUT COLLEGE

DESIDERATO, OTELLO; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009978); 11 MONTHS \$14,420

### FAIRFIELD UNIVERSITY

TOOMEY, JOHN; CHEMICAL COMPOSITION AND BIOLOGICAL ACTIVITY IN THE HOUSATONIC PIVER (Y00988): 12 MONTHS \$14,150

OCONNELL JR, E J; UNDERGRADUATE RESEARCH PARTICIPATION (Y009928); 11 MONTHS 16,576

#### NEW ENGLAND INSTITUTE

SMITH, JOHN: THE GREAT SWAMP IN PATTERSON, PUTNAM COUNTY, NEW YORK (Y003651); 11 MONTHS \$9,150

#### ST JOSEPH COLLEGE

CONDON, JEANETTE; PROBLEMS AND POTENTIAL USES OF LAKE LILLINONAH (Y009671); 12 MONTHS \$15.540

MARKHAM, SR M CLARE; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009870): 11 MONTHS \$5,990

### WESLEYAN UNIVERSITY

SMITH, CHARLES H; PARAMETERS FOR DETERMINING LAND USE IN THE COGINCHAUG RIVER VALLEY (Y009833), 12 MONTHS \$13,680 CUROTT, DAVID R; UNDERGRADUATE RESEARCH PARTICIPATION (Y009830), 11 MONTHS \$1,240

### YALR UNIVERSITY

FISHER, JOHN BERTON, SUBSTRATE PERFURBATIONS OF BENTHIC COMMUNITIES IN LONG ISLAND SOUND (YOOSES); 12 MONTHS \$12.570 WESTERFIELD, H BRADFORD; UNDERGRADUATE RESEARCH PAR-TICIPATION (YOOSES); 11 MONTHS \$18,580 RESCORLA, ROBERT A; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y000789); 11 MONTHS \$17,290

RAMUS, J 8; UNDERGRADUATE RESEARCH PARTICIPATION (Y009883); 11 MONTHS \$13,730

#### DELAWARE

### UNIVERSITY OF DELAWARE

RUSHER, DAVID L; EFFECTS OF NOISE, CAGE COMPLEXITY AND DENSITY ON LABORATORY RAT POPULATIONS (Y009910); 12 MONTHS \$25,300

COOPER, CHARLES B; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y00984); 11 MONTHS \$10,160

#### DISTRICT OF COLUMBIA

#### EXOTECH SYSTEMS INC

SCHALKOWSKY, SAMUEL; COLLEGE UNDERGRADUATE INSTRUCTIONAL PROGRAM (C143018); 8 MONTHS \$11,829

### GEORGETOWN UNIVERSITY

EVANS, PAMELA MARI; EXPLORING TECHNIQUES FOR OVERCOM-ING MISPERCEPTIONS IN INTERRACIAL COMMUNICATIONS (Y008383); 12 MONTHS \$11,870

POPE, MICHAEL T; UNDERGRADUATE RESEARCH PARTICIPATION (Y009767); 11 MONTHS \$12,720

#### SMITHSONIAN INSTITUTION

DAVIDSON, EDWARD S; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009129); 11 MONTHS \$15,620

DAVIDSON, EDWARD S; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009734); 11 MONTHS \$8,480

#### FLORIDA

#### FLORIDA STATE UNIVERSITY

GROSSLIGHT, J H; UNDERGRADUATE RESEARCH PARTICIPATION (Y009756); 11 MONTHS 419,600

#### FLORIDA TECHNOLOGICAL UNIVERSITY

POPPLETON, JAMES ERI; A BIOTIC PROFILE OF THE FTU CAMPUS PINEL 4 NDS (Y009651); 12 MONTHS \$18,060

### UNIVERSITY OF FLORIDA

DOLBIER JR, WILLIAM R; UNDERGRADUATE RESEARCH PAR-TICIPATION (Y000736): 11 MONTHS \$24,430

SHEPPARD, D MAX; UNDERGRADUATE RESEAP 4 PARTICIPATION (Y009904): 11 MONTHS \$22,800

CLUBOK, ALFRED B: UNDERGRADUATE RESEA PARTICIPATION (Y010014): 11 MONTHS \$14,590

### UNIVERSITY OF MIAMI

NEALE, PATRICK H; CHEMICAL AND BIOLOGICAL CAUSES OF SOUTH FLORIDA FISH KILLS (Y009672); 12 MONTHS \$17,670

### GEORGIA

### AGNES SCOTT COLLEGE

CLARK, MARION T; UNDERGRADUATE RESEARCH PARTICIPATION (Y009863); 11 MONTHS \$12,110

### COLUMBUS COLLEGE

MIMS, SUSAN C; EFFECTS OF AN URBAN ENVIRONMENT ON BULL CREEK DRAINAGE SYSTEM (Y009613); 12 MONTHS \$15,180

#### **EMORY UNIVERSITY**

DAY JR, R A; UNDERGRADUATE RESEARCH PARTICIPATION (Y009773); 11 MONTHS \$11,880

### GEORGIA INSTITUTE OF TECHNOLOGY

LIOTTA, CHARLES L; UNDERGRADUATE RESEARCH PARTICIPATION (Y009393); 11 MONTHS \$12,180

## UNIVERSITY OF GEORGIA

SCOTT, ALAN; UNDERGRADUATE RESEARCH PARTICIPATION (Y009806); 11 MONTHS \$18,290

WYNNE, KENNETH J; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009859); 11 MONTHS \$24,400

SANSING, NORMAN G; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y00991); 11 MONTHS \$9:300

### HAWAII

### UNIVERSITY OF HAWAII

KJARGAARD, JOFN I; RAIN FOREST ECOSYSTEMS IN WAIHOI VAL-LEY AND UPPER HANA FOREST RESERVE (Y009694); 12 MONTHS \$18,420 WESTERN, ROBERT J; THE MOKAPU OUTFALL BASELINE (Y009664); 12 MONTHS \$23,540

TUGGLE, H DAVID, UNDERGRADUATE RESEARCH PARTICIPATION (Y009817), 11 MONTHS \$7,250



#### IDAHO

### IDAHO STATE UNIVERSITY

JOHNSON, DONALD W; UNDERGRADUATE RESEARCH PARTICIPA. TION (Y010030): 11 MONTHS \$19.080

#### UNIVERSITY OF IDAHO

BUETTNER, MARK R; WATER QUALITY OF THE PALOUSE RIVER DRAINAGE (Y009616); 12 MONTHS \$16,170

RENFREW, MALCOLM M; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009924); 11 MONTHS \$12,000

#### ILLINOIS

### ARGONNE NATIONAL LABORATORY

MILLER, SHELBY A; UNDERGRADUATE RESEARCH PARTICIPATION (AGO0354); 11 MONTHS \$30,400

MILLER, SHELBY A; UNDERGRADUATE RESEARCH PARTICIPATION (AGOOJSS); 1) MONTHS 430,400

MILLER, SHELBY A: UNDERGRADUATE RESEARCH PARTICIPATION (AGOODS); 11 MONTHS \$30,400

#### BRADLEY UNIVERSITY

BJORKLUND, RICHARD G; UNDERGRADUATE RESEARCH PARTICIPATION (Y009925); 11 MONTHS \$5,790

#### FIELD MUSEUM OF NATURAL HISTORY

MARTIN, PAUL S; UNDERGRADUATE RESEARCH PARTICIPATION (Y00975#), IL MONTHS \$21,600

#### ILLINOIS INSTITUTE OF TECHNOLOGY

WARNER, BRIAN<sup>®</sup>D; STEREOSPECIFIC CHELATING AGENTS IN THE BETOXIFICATION OF HEAVY METALS (1989861); 12 MONTHS \$14,710 NEUBERT, THEODORE J; UNDERGRADUATE RESEARCH PARTICIPA-TION (1988888); 11 MONTHS \$12,520

#### KNOX COLLEGE

MITTON, JOSEPH P, GROWTH RESPONSES OF BLUE-GREEN ALGAE IN VARIED CHEMICAL CONCENTRATIONS (Y009619); 12 MONTHS \$16,620

HARRIS, LELAND; UNDERGRADUATE RESEARCH PARTICIPATION (Y009888); 11 MONTHS \$7,200

SCHRAMM, PETER; UNDERGRADUATE RESEARCH PARTICIPATION (Y010025); 11 MONTHS 48,100

#### LOYOLA UNIVERSITY

BRUNETTI, ROBERT G; EFFECTS OF CHLORIDES ON AQUATIC INVERTEBRATES (Y009641); 12 MONTHS 49,890

#### MONMOUTH COLLEGE

PAYNE, JOHN C, AND PETERSEN, QUENTIN R; A STUDENT-ORIGINATED, MANAGED AND PRESENTED COURSE IN SCIENCE FOR THE FRESHMAN NON-SCIENCE MAJOR (Y009694): 12 MONTHS \$8,900

#### NORTHERN ILLINOIS UNIVERSITY

EHORN, DDUGLAS A; AN ANALYSIS OF LEAD POLLUTION IN THE IL-LINOIS RIVER SYSTEMS (Y009681), 12 MDNTHS \$22,450

#### NORTHWESTERN UNIVERSITY

ERENRICH, GARY ROBERT; MODELING REFUSE MANAGEMENT SYSTEMS (Y009669); 12 MONTHS \$19.220

FREY, PETER; UNDERGRADUATE RESEARCH PARTICIPATION (Y009784); 11 MONTHS \$19,500

GOLDBERG, ERWIN: UNDERGRADUATE RESEARCH PARTICIPATION (1909811); 11 MONTHS \$25.640

### SOUTHERN ILLINOIS UNIVERSITY - CARBONDALE

SELLE, BRIAN; RECLAMATION OF ACID SPOIL LANDS (Y009612); 12 MONTHS 17.460

#### SOUTHERN ILLINOIS UNIVERSITY - EDWARDSVILLE

KANG, IKJU; UNDERGRADUATE RESEARCH PARTICIPATION (Y009883), 11 MONTHS \$9,050

#### UNIVERSITY OF CHICAGO

MAHERN, ANTHONY M. ARCHITECTI'RAL PRESERVATION POLICY IN CHICAGO (Y009691"); 12 MONTHS \$13,710

YANG, N.C.; UNDERGRADUATE RESEARCH PARTICIPATION (Y009774); 11 MONTHS \$12,720

HARBERGER, ARNOLD C; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y0099JJ): 11 MONTHS \$21.120

### UNIVERSITY OF ILLINOIS AT URBANA

HUMMEL, JOHN P; UNDERGRADUATE RESEARCH PARTICIPATION (Y009795): 11 MONTHS \$18,350

MARSH, RICHARD R; UNDERGRADUATE RESEARCH PARTICIPATION (Y009816); 11 MONTHS \$18,520

MALPASS, ROY S; UNDERGRADUATE RESEARCH PARTICIPATION (Yougsel): 11 MONTHS \$24,350

SANDERS, STEVEN G; UNDERGRADUATE RESEARCH PARTICIPA-TION (YOOSISS); 11 MONTHS \$15,480

### WESTERN ILLINOIS UNIVERSITY

DYER. NORMAN 1; RECOVERY OF STREAM MICROCOSMS FOLLOWING SEWAGE ELIMINATION (Y009268): 12 MONTHS \$7,580

#### INDIANA

#### **EARLHAM COLLEGE**

MARTIN, CHARLES W; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009828); 11 MONTHS \$6,750

GIFFORD, CAMERON E; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y010019); 11 MONTHS \$13,330

#### INDIANA UNIVERSITY, BLOOMINGTON

HIRS, C H W; UNDERGRADUATE RESEARCH PARTICIPATION (Y009750); 11 MONTHS \$22,580

SPRINGER, GEORGE; UNDERGRADUATE RESEARCH PARTICIPATION (Y009900); 11 MONTHS \$19.200

#### PURDUE UNIVERSITY

SHAFER, PAUL; STUDENT-ORIGINATED STUDIES (Y009567); 12 MONTHS \$16,300

LIVINGSTON, ROBERT L; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009858); 11 MONTHS \$22,350

#### UNIVERSITY OF NOTRE DAME

BORKOWSKI, JOHN G. UNDERGRADUATE RESEARCH PARTICIPA-TION (1909849); 11 MONTHS \$12,440

ALLEN, C W: UNDERGRADUATE RESEARCH PARTICIPATION (Y009885); 11 MONTHS \$5,100

YANO, K T; UNDERGRADUATE RESEARCH PARTICIPATION (Y009898); 11 MONTHS \$16,640

#### **IOWA**

### CORNELL COLLEGE

AULT, ADDISON; UNDERGRADUATE RESEARCH PARTICIPATION (Y009764); 11 MONTHS \$1,370

#### IOWA STATE UNIVERSITY OF SCIENCE & TECHNOLOGY

BARTON, THOMAS 3; UNDERGRADUATE RESEARCH PARTICIPATION (Y009309); II MONTHS \$17,590

HARTMAN, PAUL A; UNDERGRADUATE RESEARCH PARTICIPATION (Y009221); 11 MONTHS \$8,830

ROUGVIE, MALCOLM A; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y010024); 11 MONTHS \$10.340

#### LUTHER COLLEGE

KLEMME, MARK H; WATER QUALITY OF THE UPPER IOWA RIVER WATERSHED (Y009578); 12 MONTHS \$14,830

#### UNIVERSITY OF IOWA

PFLAUM, RONALD T; UNDERGRADUATE RESEARCH PARTICIPATION (Y009794); 11 MONTHS \$12,800

LEVIN, IRWIN P; UNDERGRADUATE RESEARCH PARTICIPATION (Y009805); 11 MONTHS \$18,750

GUILLORY, J KEITH; UNDERGRADUATE RESEARCH PARTICIPATION (YOLOGIS); 11 MONTHS \$10,770

#### KANSAS

### BENEDICTINE COLLEGE

KRAKOWIECKI, JOSEPH M; SCIENTIFIC AND HISTORICAL ASPECTS OF MISSOURI RIVER POLLUTANTS (Y009647); 12 MONTHS \$16,800

### FORT HAYS KANSAS STATE COLLEGE

TODD, LARRY L; PROJECT 'CARLA' COST ANALYSIS FOR THE REN'OVATION OF LAKE ATWOOD (Y009609); 12 MONTHS \$20,670

### KANSAS STATE UNIVERSITY

GREIG, WILLIAM H; POLLUTION CONTROL IN KANSAS- ATTITUDES OF OFFICIALS AND THE GENERAL POPULATION (Y009616); 12 MONTHS \$14.710

SCHRENK, W G; UNDERGRADUATE RESEARCH PARTICIPATION (Y009853); 11 MONTHS \$15,450

### UNIVERSITY OF KANSAS

MIDDAUGH, R L; UNDERGRADUATE RESEARCH PARTICIPATION (Y009797); 11 MONTHS \$18,610

CULVAHOUSE, J W; UNDERGRADUATE RESEARCH PARTICIPATION (Y009853); 11 MONTHS \$16,860

DRAPER, LAURENCE R. UNDERGRADUATE RESEARCH PARTICIPA-TION (Y999813): 11 MONTHS \$13,400

GRUNEWALD, GARY L; UNDERGRADUATE RESEARCH PARTICIPA-T/ON (Y009874); 11 MONTHS \$12,190 MALONEY, J O; UNDERGRADUATE RESEARCH PARTICIPATION

(YOO\$\$90); 11 MONTHS \$16,190
HEDRICK PHILIP W. UNDERGRADUATE RESEARCH PARTICIPATION

HEDRICK, PHILIP W; UNDERGRADUATE RESEARCH PARTICIPATION (Y010009); 11 MONTHS \$15,310

#### KENTUCKY

### CENTRE COLLEGE OF KENTUCKY

WALKUP, JOHN H: UNDERGRADUATE RESEARCH PARTICIPATION (Y009926), 11 MONTHS \$12,000

### THOMAS MORE COLLEGE

SCHEWE, GEORGE J; RELATIONSHIP OF FREEWAY POLLUTION TO SURROUNDING AND NEARBY AREAS (YOU9574); 12 MONTHS \$10,580



MINER, GEORGE K; UNDERGRADUATE RESEARCH PARTICIPATION (Y009800); 11 MONTHS \$1,070

### UNIVERSITY OF LOUISVILLE

HUBBS, STEPHEN A: LEAF DISPOSAL A STUDY OF ALTERNATIVES (Y009593): 12 MONTHS \$12,830

SHELTON, R D: UNDERGRADUATE RESEARCH PARTICIPATION (Y00994): 11 MONTHS \$10,260

### WESTERN KENTUCKY UNIVERSITY

DANIEL, LARRY: THE CONTRIBUTION OF WASTE WATER TREATMENT PLANTS TO LOCALIZED AIR POLLUTION PROBLEMS (Y009594): 12 MONTHS \$12.840

SIMPSON IR, WILLIAM B; WATER QUALITY IN THE TRIBUTARIES OF THE BARREN RIVER (YOGGES): 12 MONTHS \$11,170

#### COUISIANA

# LOUISIANA STATE UNIVERSITY, BATON ROUGE

DANIEL JR. L R. UNDERGRADUATE RESEARCH PARTICIPATION (Y009768); 11 MONTHS \$13,600

### LOUISIANA TECH UNIVERSITY

GALLI, ANTHONY J; UNDERGRADUATE RESEARCH PARTICIPATION (Y0099J3); 11 MONTHS \$9,200

#### LOYOLA UNIVERSITY

UPADHYAY, J M; UNDERGRADUATE RESEARCH PARTICIPATION (Y008916); 11 MONTHS \$10,190

#### MAINE

### JACKSON LABORATORY

WAYMOUTH, CHARITY: UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009861): 11 MONTHS \$26,510

### UNIVERSITY OF MAINE, ORONO

VETELINO, JOHN F: UNDERGRADUATE RESEARCH PARTICIPATION (Y009942): 11 MONTHS 49.590

#### MARYLAND

## NONE; OTHER PROGRAM AWARDS (WAWDS); \$4,105

### GOUCHER COLLEGE

PARSLEY, PATRICIA E: EVALUATION AND PREDICTIONS ON THE EUTROPHICATION OF THE BUSH RIVER SUB-ESTUARY (Y009536); 12 MONTHS \$18,130

### JOHNS HOPKING UNIVERSITY

PLACE, ALLEN RICHARD, NUTRITION AND SYSTEMATICS OF CHES-APEAKE BAY PLANKTERS (Y009601), 12 MONTHS \$12,550

BARTLEY, DONALD CRAIG METAL DECONTAMINATION IN OYSTERS BY DIPHENYLTHIOCARBAZONE DERIVATIVES (Y000504): 12 MONTHS \$14,840

## UNIVERSITY OF MARYLAND, COLLEGE PARK

STRUSE, CELESTE BAKER; EROSION AND SEDIMENT CONTROL ON THE UNIVERSITY OF MARYLAND CAMPUN (17009596); 12 MONTHS 47,660 BROWN, JOSHUA R C; UNDERGRADUATE RESEARCH PARTICIPATION (Y010009); 11 MONTHS \$14410

### UNIVERSITY OF MARYLAND, COLLEGE PARK-CHESAPEAKE BIOLOGICAL LAB

KOO, TED S Y; UNDERGRADUATE RESEARCH PARTICIPATION (Y010026); 11 MONTHS \$10,100

#### MASSACHUSETTS

### AMHERST COLLEGE

SILVER, MARC S. UNDERGRADUATE RESEARCH PARTICIPATION (Y009753): 11 MONTHS \$1,380

BROPHY, GERALD P; UNDERGRADUATE RESEARCH PARTICIPATION (Y009944): 11 MONTHS 47.210

#### **BOSTON COLLEGE**

LIND JR. HENRY F; AQUACULTURE OF THE NAUSET MARSH (Y009603); 12 MONTHS \$9.150

MARANO, ALBERT R; WATER QUALITY AND URBAN PLANNING IN THE LAKE COCHITUATE WATERSHED (Y009657); 12 MONTHS \$10,710

### BOSTON UNIVERSITY

JOSEPH, MONICA A; A METHOD OF QUANTITATIVE ANALYSIS OF ATMOSPHERIC POLLUTION (Y00964)); 12 MONTHS \$9,730

### CLARK UNIVERSITY

CURTIS, JOSEPH C; UNDERGRADUATE RESEARCH PARTICIPATION (Y009938); 11 MONTHS \$12,740

## HARVARD UNIVERSITY

ARLOTTO, ANTHONY T: UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009914): 11 MONTHS \$4,000

### LOWELL TECHNOLOGICAL INSTITUTE

STEED, JULIA; THE LOWELL CANAL SYSTEM AS A COMMUNITY RESOURCE (Y009579), 12 MONTHS \$18,530

### MARIA MITCHELL OBSERVATORY

HOFFLEIT, DORRIT; UNDERGRADUATE RESEARCH PARTICIPATION (Y009919); 11 MONTHS \$4,020

## MASSACHUSETTS INSTITUTE OF TECHNOLOGY

COLLIER, ROBERT WILLIAM; A GENERAL RIVER MODEL FROM ANALYSIS DATA ON CHEMICAL AND PHYSICAL PARAMETERS (Y009388); 12 MONTHS \$13,950

COHEN, NEIL: AN EXAMINATION OF URBAN LEGAL PROBLEMS (Y009649), 12 MONTHS \$16,820

GREENE, FREDERICK D; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009769): II MONTHS \$23,400

LODISH, HARVEY F. UNDERGRADUATE RESEARCH PARTICIPATION (Y009881); 11 MONTHS \$22,380

COONEY, CHARLES L; UNDERGRADUATE RESEARCH PARTICIPA, TION (Y009907), 11 MONTHS \$16,160

### MERRIMACK COLLEGE

TURANO, VINCENT S; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y00994); 11 MONTHS \$6,950

### SIMMONS COLLEGE

BELL, JERRY A; UNDERGRADUATE RESEARCH PARTICIPATION (Y0098JI); 11 MONTHS \$5.160

## SMITH COLLEGE

DE VILLAFRANCA, GEORGE W; I'NDERGRADUATE RESEARCH PAR-TICIPATION (Y009937): 11 MONTHS \$11,890

### TUFTS UNIVERSITY

HAAS, TERRY E; UNDERGRADUATE RESEARCH PARTICIPATION (Y009769); 11 MONTHS \$12,970

BROWN, LINFIELD C: UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009827); 11 MONTHS \$6,270

NICKERSON, NORTON H; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y010021): 11 MONTHS \$13,040

## UNIVERSITY OF MASSACHUSETTS, AMHERST

BAILEY, GLENN P; USE OF INDUSTRIAL EFFLUENT IN FOOD PRODUCTION AND SUBSEQUENT WASTE TREATMENT (Y009598); 12 MONTHS \$12,700

PAREZO, KENNETH L; TEST, EVALUATION AND IMPACT OF URBAN VEHICLE SYSTEMS (Y009660); 12 MONTHS \$13,490

KIRCHHOFF, ROBERT: UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009945); 11 MONTHS \$13,260

### WELLESLEY COLLEGE

ALLEN, MARY M; UNDERGRADUATE RESEARCH PARTICIPATION (Y009845); IL MONTHS \$11,050

### WILLIAMS COLLEGE

TARPY, ROGER M; UNDERGRADUATE RESEARCH PARTICIPATION (Y003848); II MONTHS \$9,450

ART, HENRY W. UNDERGRAUFATE RESEARCH PARTICIPATION (Y003938), 11 MONTHS \$9210

### WORCESTER POLYTECHNIC INSTITUTE

SAVILONIS, BRIAN; A FOLLUTION ABATEMENT SYSTEM FOR LAKE QUINNIGAMOND (Y009617): 12 MONTHS \$10,190

DAVID, DANIEL L; EVALUATION OF THE WPI URBAN VEHICLE CO. :-CEPT (Yougett), 12 MONTHS \$15,030

BUSHWELLER, C HACKETT; UNDERGRADUATE RESEARCH PAR-TICIPATION (YOU9770); 11 MONTHS \$14,400

ZWIEP, DONALD N; UNDERGRADUATE RESEARCH PARTICIPATION (Y009790); 11 MONTHS \$11,090

### MICHIGAN

#### ADRIAN COLLEGE

MILLER, ROBERT C; UNDERGRADUATE RESEARCH PARTICIPATION (Y009941); 11 MONTHS \$2,300

### **ALMA COLLEGE**

BEAUMONT, RANDOLPH C; UNDERGRADUATE RESEARCH PAR-TICIPATION (Y009946); 11 MONTHS \$6,430

### EASTERN MICHIGAN UNIVERSITY

CARTER, GILES F; UNDERGRADUATE RESEARCH PARTICIPATION (Y009878); 11 MONTHS \$8,680

#### HOPE COLLEGE

OCKERSE, RALPH: UNDERGRADUATE RESEARCH PARTICIPATION (YUO9816); 11 MONTHS \$12,060

BRINK, IRWIN J; UNDERGRADUATE RESEARCH PARTICIPATION (Y009871); 11 MONTHS \$14,620

REYNIERSE, JAMES H. UNDERGRADUATE RENEARCH PARTICIPA-TION (YOLOGA): 11 MONTHS \$12,050



### MICHIGAN STATE UNIVERSITY

BARCH, A M; UNDERGRADUATE RESEARCH PARTICIPATION (Y009788), 11 MONTHS \$16,230

KINDEL, PAUL K; UNDERGRADUATE RESEARCH PARTICIPATION (Y009884); 11 MONTHS \$18,000

KELLY, W H: UNDERGRADUATE RESEARCH PARTICIPATION (Y009845); II MONTHS \$21,120

LINNELL, ALBERT P; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009940), 11 MONTHS \$5,580

## NORTHERN MICHIGAN UNIVERSITY

STEWART, SCOT; USE OF MUNICIPAL AND INDUSTRIAL BY-PRODUCTS AS A SOIL-LIKE PRODUCT (Y009378); 12 MONTHS \$16,080 OAKLAND UNIVERSITY

TOMBOULIAN, PAUL; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009741); 11 MONTHS \$9,160

### UNIVERSITY OF MICHIGAN

LARIMORE. ANN E; UNDERGRADUATE RESEARCH PARTICIPATION (Y000745); II MONTHS \$8,820

DRACH, J C; UNDERGRADUATE RESEARCH PARTICIPATION (Y009744), 11 MONTHS \$9,930 PORD, RICHARD I; UNDERGRADUATE RESEARCH PARTICIPATION (Y0/0011): 11 MONTHS \$22,050

#### MINNESOTA

### CARLETON COLLEGE

CUNNINGHAM, MICHAEL B; STUDENT-ORIGINATED STUDIES (Y00916# 001); 12 MONTHS \$520

SHOLES, OWEN; LAND USE STUDY OF RICE COUNTY, MINNESOTA (Y009474): 12 MONTHS \$10,410

MOHRIG, JERRY R; UNDERGRADUATE RESEARCH PARTICIPATION (Y009889); 11 MONTHS \$4,060

SHOGER, ROSS L: UNDERGRADUATE RESEARCH PARTICIPATION (Youssir): 11 MONTHS \$13,260

## GUSTAYUS ADOLPHUS COLLEGE

ANDERSON, MYRON A: UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009844); 11 MONTHS \$5,090

### ST OLAF COLLEGE

LARSON, LOREN C; UNDERGRADUATE RESEARCH PARTICIPATION (Y009949); 11 MONTHS \$13,060

## UNIVERSITY OF MINNESOTA

HAGER, BETH WATERHOUSE: STUDENT ORIGINATED STUDIES (Y009171 001); 11 MONTHS \$6,850

KELLER, KENNETH H: UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009914); IT MONTHS \$12,800

University of Minnesota-University of Minnesota, Duluth HARRISS, DONALD K; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009749); 11 MONTHS \$15,530

#### MISSISSIPPI

### MISSISSIPPI COLLEGE

WEST, BURKE; LEAD TRANSFER IN THE JACKSON ENVIRONMENT (Y009675); 12 MONTHS \$16,190

### RUST COLLEGE

AHUJA, AVTAR S; UNDERGRADUATE RESEARCH PARTICIPATION (Y010012): 11 MONTHS \$10,970

## UNIVERSITY OF MISSISSIPPI

LITTLE, J L: UNDERGRADUATE RESEARCH PARTICIPATION (Y009908), 11 MONTHS \$5,000

## MISSOLIEI

## UNIVERSITY OF MISSOURI, COLUMBIA

KAISER, EDWIN M; UNDERGRADUATE RESEARCH PARTICIPATION (Y00\$773); 11 MONTHS \$15,660

CREIGHTON, DONALD L; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009913); IT MONTHS \$15,430

# university of missouri, kansas city

BAUER, STEPHEN B; DOMESTIC USE OF PESTICIDES AND FERTIL-IZERS IN AN URBAN ENVIRONMENT (YOUSESS): 12 MONTHS \$22,290

# UNIVERSITY OF MISSOURI, ROLLA

SPARLIN, DON M; UNDERGRADUATE RESEARCH PARTICIPATION (Y008841); 11 HONTHS \$10,400

SAUER JR, HARRY J; UNDERGRADUATE RESEARCH PARTICIPATION (Y009950); II MONTHS \$16,960

## WASHINGTON UNIVERSITY

WANN, DONALD F; UNDERGRADUATE RESEARCH PARTICIPATION (Yours 14); 11 MONTHS \$10,510

WATSON, PATTY JO: UNDERGRADUATE RESEARCH PARTICIPATION (Y009931); II MONTHS \$8,480

KARDOS, JOHN L; UNDERGRADUATE RESEARCH PARTICIPATION (Y009959); 11 MONTHS \$7,000

#### MONTANA

# UNIVERSITY OF MONTANA

MOZER, THOMAS J; MISSOULA VALLEY AIR POLLUTION (Y009541); 12 MONTHS \$10,730

ALT, DAVID: UNDERGRADUATE RESEARCH PARTICIPATION (Y009747); 11 MONTHS \$8,340

#### NEBRASKA

## KEARNEY STATE COLLEGE

BEER, ROBERT A; IMPACT OF WATER RESOURCE DEVELOPMENTS ON THE PLATTE RIVER (Y009048); 12 MONTHS \$9,510

## NEBRASKA WESLEYAN UNIVERSITY

FRENCH JR, WALTER R; UNDERGRADUATE RESEARCH PARTICIPA TION (Y009953); 11 MONTHS 46,400

### NEW HAMPSHIRE

## DARTMOUTH COLLEGE

LYONS, JOHN B; UNDERGRADUATE RESEARCH PARTICIPATION (Y009771); 11 MONTHS \$9,400

CLELAND, ROBERT L; UNDERGRADUATE RESEARCH PARTICIPA. TION (Y009801); 11 MONTHS \$12,090 CLEMENT, M O; UNDERGRADUATE RESEARCH PARTICIPATION

(Y009954): 11 MONTHS \$6,480 ANDERSON, JAMES J; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y010020); 11 MONTHS \$14,780

## NEW HAMPSHIRE COLLEGE

DUBOIS, MARY R; ATTITUDES AND RESISTANCE TO URBAN CHANGE (Y000686): 12 MONTHS \$18,330

## ST ANSELMOS COLLEGE

SAVAGE, PAUL; UNDERGRADUATE RESEARCH PARTICIPATION (Y009867); 11 MONTHS \$12,040

# University of New Hampshire, Durham

BECHTELL, HOMER; UNDERGRADUATE RESEARCH PARTICIPATION (Yoosss), 11 MONTHS \$13,140

### NEW JERSEY

# FAIRLEIGH DICKINSON UNIVERSITY

DONG, MITCHELL LANG, EFFECTS OF INDUCSTRIAL POLLUTION ON THE ECOLOGY OF LONG CORAL REEF (YOUGHTS); 12 MONTHS \$19,350

## PRINCETON UNIVERSITY

GILLHAM, J K; UNDERGRADUATE RESEARCH PARTICIPATION (YOSSES); 11 MONTHS \$2,320

FRESCO, JACQUES R; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009887); 11 MONTHS \$12,800

### RUTGERS UNIVERSITY

PAGE, ROBERT H; UNDERGRADUATE RESEARCH PARTICIPATION (Y009817); 11 MONTHS \$12,200

ZIMMERBERG, H J; UNDERGRADUATE RESEARCH PARTICIPATION (Y009829), 11 MONTHS \$24,710

### SETON HALL UNIVERSITY

STARITA, RICHARD J: CORRELATIONS OF ATMOSPHERIC TRACE METAL CONCENTRATIONS WITH BODY BURDENS (Y009585); 12 MONTHS

#### NEW MEXICO

# NEW MEXICO INSTITUTE OF MINING AND TRCHNOLOGY

GRAGO, JOHN; STUDENT-ORIGINATED STUDIES (Y005207 001): \$502 MULLER, THOMAS J, ECOLOGY OF THE MIDWAY WATERSHED AREA (Y009888), 12 MONTHS \$10,000

## NEW MEXICO STATE UNIVERSITY

AMES, LYNFORD L; UNDERGRADUATE RESEARCH PARTICIPATION (Y009956); 11 MONTHS \$8,470

### NEW YORK

# american museum of natural history

ARONSON, LESTER R; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009875): 11 MONTHS \$25,270 ARONSON, LESTER R; UNDERGRADUATE RESEARCH PARTICIPA.

TION (Y009937); 11 MONTHS \$2,520 ARONSON, LESTER R; UNDERGRADUATE RESEARCH PARTICIPA-

### TION (YO10017); 11 MONTHS \$25,480 BARUCH COLLEGE

STORER, NORMAN W; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009933), 11 MONTHS \$5,100



#### BROOKHAVEN LABORATORY

PRICE, GLENN A; UNDERGRADUATE RESEARCH PARTICIPATION (AG00331); 11 MONTHS \$10,810

PRICE, GLENN A: UNDERGRADUATE RESEARCH PARTICIPATION (AG00368); 11 MONTHS \$2,410

#### BROOKLYN COLLEGE

ZIEGER, HERMAN E; UNDERGRADUATE RESEARCH PARTICIPATION (Y009940): 11 MONTHS \$24,000

#### CANISHIS COLLEGE

GASIEWICZ, THOMAS, CORRELATION OF MERCURY AND CADMIUM LEVELS WITH HUMAN ENVIRONMENT (YOOGGED); 12 MONTHS 88,890 LEONE, JAMES A; UNDERGRADUATE RESEARCH PARTICIPATION (Y000444); 11 MONTHS \$8,930

KREMER, CHESTER B; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009887): 11 MONTHS \$31,000

### CLARKSON COLLEGE OF TECHNOLOGY

CHUDYK, WAYNE; SELF-CLEANSING PROPERTIES OF THE ST. REGIS RIVER (Y009074), 12 MONTHS \$7,650

COONEY, DAVID O; UNDERGRADUATE RESEARCH PARTICIPATION (Y009861); 11 MONTHS \$12,720

## COLD SPRING HAPBOR LAB OF QUANTITATIVE BIOLOGY

ZIPSER, DAVID; UNDERGRADUATE RESEARCH PARTICIPATION (Y009699): 10 MONTHS \$15,640

#### COLGATE UNIVERSITY

MCLELLAND, JAMES: UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009730); 11 MONTHS \$13,290

#### COLLEGE AT BROCKPORT

FINLEY, K THOMAS; UNDERGRADUATE RESEARCH PARTICIPATION (Y003337); 11 MONTHS \$11,000

#### CORNELL UNIVERSITY

TRAVIS, SANDRA E; WATER QUALITY OF THE EAST RIVER, CRESTED BUTTE, COLORADO (Y008600); 12 MONTHS \$13,140

MILLER, W T: UNDERGRADUATE RESEARCH PARTICIPATION (Y009822); 11 MONTHS \$21,000

NELSON, WALTER L: UNDERGRADUATE RESEARCH PARTICIPATION (Y010023); 11 MONTHS \$18,860

### HOBART AND WILLIAM SMITH COLLEGES

EIDDER, RICHARD B. ALLOCHTHONOUS POLLUTANTS, IN SENECA
LARE (Yoossof, 12 MONTHS \$18,970
HUNTER COLLEGE

ONEILL, SUSAN; MODELING TERRITORIAL BEHAVIOR IN RETARDED CHILDREN (Y009580); 12 MONTHS \$18,480

ABBOTT, EDWIN H; UNDERGRADUATE RESEARCH PARTICIPATION (Y009888); 11 MONTHS \$11,510

#### ITHACA COLLEGE

DELANNEY, LOUIS E; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009744); 11 MONTHS \$6,150

KOCH, HEINZ F; UNDERGRADUATE RESEARCH PARTICIPATION (Y009819); 11 MONTHS 47,440

### LE MOYNE COLLEGE

KENNEY, PHILIP J: ECOLOGY OF CAZENOVIA LAKE (Y009685); 12 MONTHS \$10,120

## NEW YORK UNIVERSITY

YARMUS, L; UNDERGRADUATE RESEARCH PARTICIPATION (Y009894); 11 MONTHS \$8,090

## POLYTECHNIC INSTITUTE OF BROOKLYN

PANOUSSIS, GEORGE: STUDENT-ORIGINATED STUDIES (YOU9152 001); 1300

BOORSTYN, ROBERT R: UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009765); [1 MONTHS \$27,900

NARDO, SEBASTIAN V; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y000)10); 11 MONTHS \$14,880

KOPLIK, BERNARD; UNDERGRADUATE RESEARCH PARTICIPATION (Y008893); 11 MONTHS \$12,720

WEINDLING, JOACHIM I; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009901): 11 MONTHS \$18,100

### QUEENS COLLEGE

MAZIN, GEORGE; POPULATION DENSITY AND SOCIAL PATHOLOGY IN SELECTED AREAS OF NEW YORK CITY (Y009459\*); 12 MONTHS \$10,000

### RENSSELAER POLYTECHNIC INSTITUTE

SCAVIA, DON; PROPOSALS FOR ENVIRONMENTAL MANAGEMENT OF RENSSELAER COUNTY LAKES (YOUSELL): 12 MONTHS \$19,200

MEDICUS, HEINRICH A; UNDSRGRADUATE RESEARCH PARTICIPA-TION (Y008878); 11 MONTHS \$23,450

RUBENFELD. LESTER: UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009964); 11 MONTHS \$10,380

### ROCHESTER INSTITUTE OF TECHNOLOGY

KRAKOWER, EARL; UNDERGRADUATE RESEARCH PARTICIPATION (Y009964), 11 MONTHS \$7,780

### SFIDMORE COLLEGE

LE FURGY, WILLIAM G; UNDERGRADUATE RESEARCH PARTICIPA. TION (Y006965); 11 MONTHS \$10,070

#### ST LAWRENCE UNIVERSITY

ER CKSON, J MARK; UNDERGRADUATE RESEARCH PARTICIPATION (YOG9761); II MONTHS \$7,990

#### STATE UNIVERSITY AT ALBANY

MADDOW, JANE; COLLECTION AND ANALYSES OF AEROSOLS IN THE ALBANY AREA (Y009655); 12 MONTHS \$24,360

## STATE UNIVERSITY AT BINGHAMTON

POMPI, ROBERT L; UNDERGRADUATE RESEARCH PARTICIPATION (Y009966); 11 MONTHS \$5,960

### STATE UNIVERSITY AT BUFFALO

GORELICK, KENNETH; THE EFFECTS OF ORGANOMERCURIALS ON THE DEVELOPMENT OF 'DROSOPHILA MELANOGASTER' (YGG9645); 12 MONTHS \$10,000

## STATE UNIVERSITY AT STONY BROOK

THORPE, JOHN A: UNDERGRADUATE RESEARCH PARTICIPATION (Yoosses); 11 MONTHS \$14,490

### SYRACUSE UNIVERSITY

TURIAN. RAFFI M; UNDERGRADUATE RESEARCH PARTICIPATION (Y009788), 11 MONTHS \$14,240

DOSANJH, D S. UNDERGRADUATE RESEARCH PARTICIPATION (Y009857); 11 MONTHS \$11,140

SCHENCK, JOHN; UNDERGRADUATE RESEARCH PARTICIPATION (Y0100JY), 11 MONTHS \$8,660

#### UNION COLLEGE

POTTER, DONALD 1; UNDERGRADUATE RESEARCH PARTICIPATION (Y009968): 11 MONTHS \$7,140

### UNIVERSITY OF ROCHESTER

THORNE, JAMES F; THE IRONDEQUOIT CREEK- AN INDIRECT NUTRIENT SOURCE FOR LAKE ONTARIO (1009893); 12 MONTHS 122,740 STRAHAN, ROBERT F; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y008858); 11 MONTHS \$24,230

CARSTENSEN, EDWIN L; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009969): 11 MONTHS \$11,210

### HEALTH RESEARCH INC-ROSWELL PARK DIVISION

MIRAND, EDWIN A; UNDERGRADUATE RESEARCH PARTICIPATION (Y005939 001): \$3,131

MIRAND, EDWIN A; UNDERGRADUATE RESEARCH PARTICIPATION (Y00\$811); 11 MONTHS \$36,000

## NEW YORK UNIVERSITY-UNIVERSITY HEIGHTS CENTER

SHAW, SUSANN J N; UNDERGRADUATE RESEARCH PARTICIPATION (Y009962); 11 MONTHS \$19,350

### **NORTH CAROUNA**

### DUKE UNIVERSITY

WELLS, RICHARD L; UNDERGRADUATE RESEARCH PARTICIPATION (Y009904), 11 MONTHS \$19,200

WHITE, R A; UNDERGRADUATE RESEARCH PARTICIPATION (Y009970); 11 MONTHS \$4,860

## UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

JACOBSON, ALVIN L; UNDERGRADUATE RESEARCH PARTICIPATION (Y009788); 11 MONTHS \$18,600

## UNIVERSITY OF NORTH CAROLINA AT CHARLOTTE

REDDEN, ROBERT R; A MODEL OF AIR POLLUTION IN CHARLOTTE-MECKLENBURG (Y009689); 12 MONTHS \$18,480

### WAKE FOREST UNIVERSITY

NOWELL, JOHN W; UNDERGRADUATE RESEARCH PARTICIPATION (Y009777); 11 MONTHS \$7,640

#### **NORTH DAKOTA**

### NORTH DAKOTA STATE UNIVERSITY

MARICICH, TOM J: UNDERGRADUATE RESEARCH PARTICIPATION (Y009779); 11 MONTHS \$9,890

#### UNIVERSITY OF NORTH DAKOTA

KARNER, FRANK R; UNDERGRADUATE RESEARCH PARTICIPATION (Y009734); II MONTHS \$9,560

BIRTCHER, BRENT; UNDERGRADUATE RESEARCH PARTICIPATION (Y009904); II MONTHS \$7,610

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### ANTIOCH COLLEGE

TAYLOR, CHARLES E; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009881); 11 MONTHS \$7,900



#### BOWLING GREEN STATE UNIVERSITY

EICHENBERG, DEBORAH L; THE DISEASE ECOLOGY OF CALIFORNIA ENCEPHALITIS IN NORTHWESTERN OHIO (Y009644), 12 MONTHS \$17,190 KINSTLE, THOMAS H; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009917), 11 MONTHS \$8,290

#### CASE WESTERN RESERVE UNIVERSITY

PIERCE, DAVID R; SURFACE MINING AND RECLAMATION FOUR ECOSYSTEMS IN TWO OHIO REGIONS (Y009601); 13 MONTHS \$20,190 LANDO, JEROME B, UNDERGRADUATE RESEARCH PARTICIPATION

(Y00983J), 11 MONTHS \$11,780 DAYIS, ROBERT P; UNDERGRADUATE RESEARCH PARTICIPATION (Y009878); 11 MONTHS \$25,730

WALLACE, JOHN F. UNDERGRADUATE RESEARCH PARTICIPATION (Y00997#); 11 MONTHS \$11,560

FORT JR, TOMLINSON; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009973), II MONTHS \$9,400

#### COLLEGE OF WOOSTER

BORDERS JR, CHARLES L; UNDERGRADUATE RESEARCH PARTICIPATION (Y009711): 11 MONTHS \$8,955

#### DENISON UNIVERSITY

MICKELSON, MICHAEL E; UNDERGRADUATE RESEARCH PAR-TICIPATION (Y003819); 11 MONTHS \$4,040

### HEIDELBERG COLLEGE

PEEPLES, MARK E; STUDENT-ORIGINATED STUDIES (Y009363); 12 MONTHS \$16,930

#### HIRAM COLLEGE

WHEELER, DONALD R; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009974), 11 MONTHS \$6,350

#### JOHN CARROLL UNIVERSITY

CAROME, EDWARD F; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009973); 11 MONTHS \$11,250

#### KENT STATE UNIVERSITY

RATLIFF, JUDD: THE EFFECT OF SELECTED METALS ON CONDI-TIONED ORGANISMS (Y009666); 12 MONTHS \$14,900

TREICHLER, F ROBERT; UNDERGRADUATE RESEARCH PARTICIPA-TION (YOOSOS): 11 MONTHS \$9,960

#### MARIETTA COLLEGE

PRINCE, ALBERT; UNDERGRADUATE RESEARCH PARTICIPATION (Y009918); 11 MONTHS \$7,410

#### **OBERLIN COLLEGE**

SCHOONMAKER, RICHARD C; UNDERGRADUATE RESEARCH PAR-TICIPATION (Y009738); 11 MONTHS \$9,460

SHERMAN, THOMAS F; UNDERGRADUATE RESEARCH PARTICIPA-TION (YOOSTIS), 11 MONTHS \$12,580

VAN ATTA, E LOCHE; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009778); 11 MONTHS \$13,400

TUFTS, ROBERT W; UNDERGRADUATE RESEARCH PARTICIPATION (Y009977); 11 KONTHS \$4,110

#### OHIO STATE UNIVERSITY

WELCH, WILLIAM R; BUILDING MATERIALS FROM RECYCLED GLASS, CERAMICS, PAPER, AND PLASTICS (1909842), 12 MONTHS \$9,970 MEEK, DEVON W; UNDERGRADUATE RESWARCH PARTICIPATION (1909840); 11 MONTHS \$10,040

MALSPEIS, LOUIS, UNDERGRADUATE RESEARCH PARTICIPATION (YD09978), 11 MONTHS \$25,080

#### UNIVERSITY OF DAYTON

BROWN, CHARLES D; EFFECTS OF TITANIUM DIOXIDE IN BUCKWHEAT PLANTS (Y009547); 12 MONTHS \$6,630

CHANTELL, CHARLES J; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009979); 11 MONTHS \$13,750

### WITTENBERG UNIVERSITY

WESTNEAT, DAVID F; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009980); 11 MONTHS \$6,100

### WRIGHT STATE UNIVERSITY

HANSON, HARVEY M; UNDERGRADUATE RESEARCH PARTICIPA-TION (1908981); 11 MONTHS \$1,890

NUSSBAUM, NOELS; UNDERGRADUATE RESEARCH PARTICIPATION (Y009582); 11 MONTHS \$4.500

### OKLAHOMA

#### OKLAHOMA CITY UNIVERSITY

WURTH, MICHAEL J; UNDERGRADUATE RENEARCH PARTICIPATION (Y00998J); 11 MONTHS \$5,670

### SOUTHWESTERN STATE COLLEGE

WHALEY, GARRY; STUDENT-ORIGINATED STUDIES (Y009564); 12 MONTHS \$13,250

### UNIVERSITY OF OKLAHOMA

HARVEY, W LAWRENCE; STUDENT ORIGINATED STUDIES (Y009)42 001); 2 MONTHS 4900

REISS, CHARLES; ANALYSIS OF THE SPATIAL DIFFUSION OF OKLAHOMA CITY GHETTO AREAS (Y009604); 12 MONTHS \$17,260

CHRISTMORE, DAVID S: COMMERCIAL PESTICIDES AND THEIR EF-FECTS ON SOIL-LIVING 'RHIZOBIUM AND AZOTOBACTER' (Y009656); 12 MONTHS \$16,760

RISSER, PAUL G; UNDERGRADUATE RESEARCH PARTICIPATION (Y009794); 11 MONTHS \$20,140

JERNER, R CRAIG: UNDERGRADUATE RESEARCH PARTICIPATION (Y009934); 11 MONTHS \$17,600

### UNIVERSITY OF TULSA

BROWN, CLARENCE G: STUDENT-ORIGINATED STUDIES (Y009518); 12 MONTHS \$19,460

#### OREGON

### LINFIELD COLLEGE

BOLING, JOHN L; UNDERGRADUATE RESEARCH PARTICIPATION (Y009985); 11 MONTHS \$5,790

#### **OREGON STATE UNIVERSITY**

CARPENTER, STEVE; EPIPHYTIC LICHENS AS AN INDICATOR OF POLLUTION IN THE WILLAMETTE VALLEY (Y009649); 12 MONTHS \$8,500 LOVELAND, WALTER; UNDERGRADUATE RESEARCH PARTICIPATION (Y009989); 11 MONTHS \$12,480

#### REED COLLEGE

KELLOGG, GARY LEE; EFFECTS OF CARBON MONOXIDE CONCEN-TRATIONS ON BEHAVIOR IN RATS (Y009644); 12 MONTHS \$8,020

HANKINS, DEBORAH; TRACE ELEMENTS IN FISH AS RELATED TO CONCENTRATIONS IN ENVIRONMENT AND DIET (Y009650); 12 MONTHS \$12,050

CRONYN, MARSHALL W. UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009739): 11 MONTHS \$1,440

SQUIEF, LESLIE H; UNDERGRADUATE RESEARCH PARTICIPATION (YGG9896); 11 MONTHS \$15,920

## UNIVERSITY OF OREGON · EUGENE

BATISTA, CARLOS; IMPACT OF BUILDING LAWS ON HOUSING DENIGN FOR SUB-CULTURAL GROUPS (Y009041); 12 MONTHS \$9,360 KIMMEL, CHARLES B, UNDERGRADUATE RENEARCH PARTICIPA-TION (Y009137); 11 MONTHS \$25,630

KOENIG, THOMAS W; UNDERGRADUATE RESEARCH PARTICIPATION (Y009776); 11 MONTHS \$10,410

#### PENNSYLVANIA

## BUCKNELL UNIVERSITY

WINSTEAD, MELDRUM; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009850), 11 MONTHS \$9,920

NICKELSEN, RICHARD P; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009852); 11 MONTHS \$4,000

HARCLERODE, JACK; UNDERGRADUATE RESEARCH PARTICIPA-TION (YOUPSET); 11 MONTHS \$12,350

### DICKINSON COLLEGE

MEYER. MARVIN W; UNDERGRADUATE RESEARCH PARTICIPATION (Y010029); 11 MONTHS \$10,320

### DREXEL UNIVERSITY

SAVERY, C WILLIAM; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009988); 11 MONTHS \$12,530

### FRANKLIN AND MARSHALL COLLEGE

FENSTER, DAVID M; A BIOLOGICAL SURYEY OF CONESTOGA BASIN STREAM POLLUTION (Y009573); 12 MONTHS \$1,860

BEUTNER, EDWARD C; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009731), 11 MONTHS \$7,450

BROOKSHIRE, KENNETH H; UNDERGRADUATE RESEARCH PAR-TICIPATION (YOU9804); 11 MONTHS \$16,680

#### **GENEVA COLLEGE**

ADAMS, ROY M; UNDERGRADUATE RESEARCH PARTICIPATION (Y009904), 11 MONTHS \$5,250

## HAVERFORD COLLEGE

HUNTER, HOLLAND; UNDERGRADUATE RESEARCH PARTICIPATION (Y009738); 11 MONTHS \$9,800

#### JUNIATA COLLEGE

SCHETTLER JR, PAUL D; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y0097J9): 11 MONTHS \$13,410

#### LAFAYETTE COLLEGE

YOUNG, ROGER K; THE BUSHKILL WATERSHED AN ENVIRONMENTAL BASELINE STUDY (YOUSELE), 12 MONTHS \$18,500

#### LEHIGH UNIVERSITY

GIANFORCARO, GREGORY J, ISOLATION AND REMOVAL OF COLOR-PRODUCING SUBSTANCES FROM A WATER SUPPLY (YOOSEES); 12 MONTHS \$9,020

KALNINS, ARTURS; UNDERGRADUATE RESEARCH PARTICIPATION (Y009868): 11 MONTHS \$13,240



WOOD, JOHN D; UNDERGRADUATE RESEARCH PARTICIPATION (Y009591): 11 MONTHS \$11.760

CHEN, WALFAH; UNDERGRADUATE RESEARCH PARTICIPATION (Y009939): 11 MONTHS 49,230

#### LOCK HAVEN STATE COLLEGE

KRAMER, ROBERT E; POPULATION AND DIVERSITY OF LOWER BALD EAGLE CREEK BIOTA (Y009618); 12 MONTHS \$5,010

#### MUHLENBERG COLLEGE

SMART, G N RUSSELL; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009745); 11 MONTHS \$10,480

#### PENNSYLVANIA STATE UNIVERSITY

KNEIB, RONALD T; CHEMICAL AND BIOLOGICAL DYNAMICS OF STRESSED STREAM SITUATIONS (Y009366); 12 MONTHS \$13,470

STERN, ROBERT M; UNDERGRADUATE RESEARCH PARTICIPATION (Y009866): 11 MONTHS \$11,230

#### TEMPLE UNIVERSITY

DUBECK, LERGY; UNDERGRADUATE RESEARCH PARTICIPATION (Y00990); 11 MONTHS \$9,350

#### UNIVERSITY OF PITTSBURGH

READING, REID R; UNDERGRADUATE RESEARCH PARTICIPATION (Y009781); 11 MONTHS \$9.340

### WASHINGTON AND JEFFERSON COLLEGE

HAGER, BRUCE L; PHENOL REMOVAL FROM INDUSTRIAL WASTES USING AMBERLITE XAD-4 RESIN AND MICROBIOLOGICAL METHODS (Y009637); 12 MONTHS \$8,690

#### FRANKLIN INSTITUTE-BARTOL RESEARCH FOUNDATION

KENT JR, DONALD W; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009831); 11 MONTHS \$10,510

#### PENNSYLVANIA STATE UNIVERSITY-BEHREND CAMPUS

OKELLY, WILLIAM A; STREAM ORGANISMS AND THEIR RESPONSES TO ENVIRONMENTAL CHANGE (Y009621); 12 MONTHS \$10,830

#### RHODE ISLAND

NONE; OTHER PROGRAM AWARDS (01AWDS): \$2,075

#### BROWN UNIVERSITY

CARSON, STEVEN R: EFFECTS OF POLLUTION ON BIOLOGICAL AND PHYSICAL PARAMETERS OF MOUNT HOPE BAY (Y009606): 12 MONTHS #19.140

COLE, ROBERT H; FEASIBILITY STUDY OF FLYWHEEL URBAN VEHI. CLE (Y009676); 12 MONTHS \$16.590

ENGEN, TRYGG: UNDERGRADUATE RESEARCH PARTICIPATION (Y009783); 11 MONTHS \$16,060

CLAPP, LEALLYN B; UNDERGRADUATE RESEARCH PARTICIPATION (Y0098J0); 11 MONTHS \$18,740

### PROVIDENCE COLLEGE

GALKOWSKI, THEODORE T; UNDERGRADUATE RESEARCH PAR-TICIPATION (Y009798); 11 MONTHS \$9,770

### UNIVERSITY OF RHODE ISLAND

POLK, CHARLES; UNDERGRADUATE RESEARCH PARTICIPATION (Y009981); 11 MONTHS \$13,540

### SOUTH CAROUNA

#### **CLEMSON UNIVERSITY**

SNIDER, ERIC H; WATER POLLUTION IN THE CHATTOOGA AND TU-GALOG RIVERS (Y009691): 12 MONTHS \$11,170

#### FURMAN UNIVERSITY

ARRINGTON JR, CHARLES A; UNDERGRADUATE RESEARCH PARTICIPATION (Y009787); 11 MONTHS \$8,630

STRATTON, LEWIS P; UNDERGRADUATE RESEARCH PARTICIPATION (YOGGEO); IL MONTHS \$7,520

BRANTLEY, WILLIAM H; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009997): 11 MONTHS \$1,600

### UNIVERSITY OF SOUTH CAROLINA

WOODWARD JR, E C; UNDERGRADUATE RESEARCH PARTICIPATION (Y009860); 11 MONTHS \$6.420

UNIVERSITY OF GEORGIA-SAVANNAH RIVER ECOLOGY LABORATORY
GIBBONS, J WHITFIELD; UNDERGRADUATE RESEARCH PARTICIPATION (Y00888); 11 MONTHS \$12,920

### **SOUTH DAKOTA**

### AUGUSTANA COLLEGE

PRESCOTT, LANSING M; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009992); 11 MONTHS \$9,210

#### SIOUX FALLS COLLEGE

GIBSON, JERRY D; CHEMICAL, BIOLOGICAL, AND SOCIOLOGICAL ANALYSES OF THE BIG SIOUX RIVER SYSTEM (Y009640); 12 MONTHS \$16,380

#### UNIVERSITY OF SOUTH DAKOTA

DICKHAUT, STEVEN C; MERCURY CONTAMINANTS IN PEOPLE AND FOOD SUPPLIES IN SOUTH DAKOTA (Y009670); 12 MONTHS \$11,180

#### TENNESSEE

#### FISK UNIVERSITY

JACKSON, EDWARD; UNDERGRADUATE RESEARCH PARTICIPATION (Y009905): 11 MONTHS \$18.430

#### OAK RIDGE ASSOCIATED UNIVERSITIES

KYKER, GRANVIL C; UNDERGRADUATE RESEARCH PARTICIPATION (AGO:J57); 11 MONTHS \$12560

#### SOUTHWESTERN AT MEMPHIS

ELLSWORTH, DANIEL LLOYD: THE UPTAKE OF MERCURY BY LIV-ING SYSTEMS AND ITS EFFECTS ON THEM (Y008003); 12 MONTHS \$15,400 MORTIMER, ROBERT G; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y010013); 11 MONTHS \$5,400

### TENNESSEE TECHNOLOGICAL UNIVERSITY

SISSOM, LEIGHTON E; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009993); 11 MONTHS \$17,870

## UNIVERSITY OF TENNESSEE, KNOXVILLE

GRAVES, RONALD LEE; FEASIBILITY OF AMMONIA AS AN INTERNAL COMBUSTION FUEL (Y009692); 12 MONTHS \$6,410

SNYDER, W T; UNDERGRADUATE RESEARCH PARTICIPATION (Y009994); 11 MONTHS \$5,280

JONES, ARTHUR W; UNDERGRADUATE RESEARCH PARTICIPATION (Y009999); 11 MONTHS \$18,520

### VANDERBILT UNIVERSITY

HENDERSHOT, GERRY E; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009786); II MONTHS \$13,490

THUNE, LELAND E; UNDERGRADUATE RESEARCH PARTICIPATION (Y009854); 11 MONTHS \$12,830

#### TEXAS

### ABILENE CHRISTIAN COLLEGE

DAVIS, ALVIE L; UNDERGRADUATE RESEARCH PARTICIPATION (Y009716); 11 MONTHS \$4,900

#### AUSTIN COLLEGE

SNIDER, ROBERT L; IMPACT OF INTERACTIVE TELEVISION ON THE RACIAL ATTITUDES OF SIXTH GRADE STUDENTS (Y009584); 12 MONTHS \$17,850

### NORTH TEXAS STATE UNIVERSITY

SYBERT, J R; UNDERGRADUATE RESEARCH PARTICIPATION (Y009996): 11 MONTHS \$9,560

### RICE UNIVERSITY

GLASS, G P; UNDERGRADUATE RESEARCH PARTICIPATION (Y009876); 11 MONTHS \$10,740

#### SAM HOUSTON STATE UNIVERSITY

MCCARLEY, G SCOTT; STUDENT-ORIGINATED STUDIES (Y009569); 12 MONTHS \$12,730

#### TEXAS TECH UNIVERSITY

SMYTH, THOMAS JOT; SOIL ADSORPTION AND FEEDLOT EFFLUENT QUALITY ON THE TEXAS HIGH PLAINS (Y009599); 12 MONTHS \$13,730 KRISTIANSEN, MAGNE; UNDERGRADUATE RESEARCH PARTICIPATION (Y009999); 11 MONTHS \$14,360

### TRINITY UNIVERSITY

PLUMMER, B F; UNDERGRADUATE RESEARCH PARTICIPATION (Y009788); 11 MONTHS \$8,660

## UNIV OF TEXAS AT AUSTIN

WADE, CHARLES G; UNDERGRADUATE RESEARCH PARTICIPATION (Y009807); 11 MONTHS \$19,960

#### UNIVERSITY OF HOUSTON

BAILEY, JAMES E: UNDERGRADUATE RESEARCH PARTICIPATION (Y010010); 11 MONTHS \$10,300

#### UTAH

### BRIGHAM YOUNG UNIVERSITY

KUNZ, PHILLIP R; UNDERGRADUATE RESEARCH PARTICIPATION (Y009897); 11 MONTHS \$20,240

### UNIVERSITY OF UTAH

MARCHANT, BRUCE D; FOAM GLASS INSULATION FROM WASTE GLASS (Y009641); 12 MONTHS \$9,760



### WEBER STATE COLLEGE

1 7

SHIOZAWA, DENNIS KENJI; INFLUENCES OF BRINE FLY CONTROL PROGRAMS ON ECOSYSTEMS OF GREAT SALT LAKE (Y009391); 12

#### **VERMONT**

### MIDDLEBURY COLLEGE

LEDLIE, DAVID B; UNDERGRADUATE RESEARCH PARTICIPATION (Y0098 to); 11 MONTHS \$11,040

### UNIVERSITY OF VERMONT

SAXBY, WILLIAM R: EFFECTS OF TETRAHYDROCANNABINOL ON BEHAVIOR AND BRAIN FUNCTION (Y009682); 12 MONTHS \$16,570 KUEHNE, MARTIN; UNDERGRADUATE RESEARCH PARTICIPATION (Y003939); 11 MONTHS \$11,680

#### VIRGINIA

## COLLEGE OF WILLIAM AND MARY

GOODWIN, BRUCE K; UNDERGRADUATE RESEARCH PARTICIPATION (Y010015); 11 MONTHS \$6,800

### HAMPDEN-SYDNEY COLLEGE

SIPE JR, RERBERT J; UNDERGRADUATE RESEARCH PARTICIPATION (Y0098/8); II MONTHS \$6,960

KIESS, EDWARD M; UNDERGRADUATE RESEARCH PARTICIPATION (Y008838); 11 MONTHS \$2,120

#### HOLLINS COLLEGE

FLORY, RANDALL K; UNDERGRADUATE RESEARCH PARTICIPATION (Y010000); 11 MONTHS \$7,200

LOVELACE, EUGENE A; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y003864); 11 MONTHS \$12,610

## VIRGINIA COMMONWEALTH UNIVERSITY

TAYLOR, DAVID G; INTERACTIONS OF NITRILOTRIACETIC ACID AND METAL IONS IN NATURAL WATERS (Y009610); 12 MONTHS \$21,390

### VIRGINIA POLYTECHNIC INSTITUTE

STEIGERWALD, JOHN; CHILDREN'S RESPONSES TO ENVIRONMEN-TAL SPACES (Y009570); 12 MONTHS \$9,580

HAWTHORNE, JOHN JULIAN; EFFECTS OF CHEMICAL AND BIOLOGI-CAL POLLUTANTS ON THE ECOLOGY OF A STREAM (YOOGSON); 12 MONTHS \$9,500

COMPARIN, ROBERT A; UNDERGRADUATE RESEARCH PARTICIPA-710N (Y010001); 11 MONTHS \$10,920

## WASHINGTON AND LEE UNIVERSITY

WISE, JOHN H; UNDERGRADUATE RESEARCH PARTICIPATION (Yousteo); 11 MONTHS \$7,130

### WASHINGTON

## EVERGREEN STATE COLLEGE

KORMONDY, EDWARD J; RESEARCH ON THE HOOD CANAL (YOOGS LE); 10 MONTHS \$4,908

# FOUNDATION FOR GLACIER AND ENVIRONMENTAL RES

MILLER, MAYNARD M; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009813); 11 MONTHS \$19,480

### UNIVERSITY OF WASHINGTON

COMIS, JOHN G; WATERSHED ECOLOGY (PHASE II) OF COAL AND KELSET CREEKS, WASHINGTON (Y009511); 12 MONTHS \$18,590

NELSON, WENDEL L; UNDERGRADUATE RESEARCH PARTICIPA-TION (Y009832); 11 MONTHS \$15,000

## WASHINGTON STATE UNIVERSITY

COLLINS JR. RALPH W: MULTIPLE LAND USE PRIORITY-PLANNING

FOR LATAH COUNTY, IDAHO (Y009589): 12 MONTHS \$12,180
GARLAND, JOHN K; UNDERGRADUATE RESEARCH PARTICIPATION (Y009710): 11 MONTHS \$13,530

#### **WEST VIRGINIA**

### WEST VIRGINIA STATE COLLEGE

ADAMS, ALAN M; EFFECTS ON ANIMAL LIFE OF SULFUR AND SELENIUM DIOXIDES (Y009680); 12 MONTHS \$20,160

### WEST VIRGINIA UNIVERSITY

RREINIK, DOUGLAS; A STUDY OF AN ACOUSTICAL SLUM CORRIDOR (Y009633); 12 MONTHS \$18,910

BLACKSHAW, G LANSING; UNDERGRADUATE RESEARCH PAR-TICIPATION (Y010002); 11 MONTHS \$8,330

#### WHEELING COLLEGE

LONES, CHARLES J; UNDERGRADUATE RESEARCH PARTICIPATION (Y010063), 11 MONTHS \$5,020

#### WISCONSIN

BELOIT COLLEGE

STENSTROM, RICHARD C; UNDERGRADUATE RESEARCH PAR-TICIPATION (YOOPTST): 11 MONTHS \$3,530

DOBSON, DAVID A: UNDERGRADUATE RESEARCH PARTICIPATION (Y010004); II MONTHS \$5,610

#### CARROLL COLLEGE

GOUGH, STEPHEN B; POLLUTION CONTROL OF FARM FEEDLOT RU-NOFF THROUGH SOIL PERCOLATION (Y009580); 12 MONTHS \$11,340

HARSH, HAROLD; POLLUTION PARAMETERS OF THE MILWAUKEE. MENOMONEE RIVER SYSTEM (Y009362); 12 MONTHS \$21,060

### RIPON COLLEGE

LITTON JR, JAMES R; EUTROPHICATION OF GREEN LAKE AND LAKE WINNEBAGO (Y009650); 12 MON's HS \$20,640

### STOUT STATE UNIVERSITY

BURWELL, MARK; COMPARATIVE ENVIRONMENTS OF NORTHWESTERN WISCONSIN RIVERS (Y006663); 12 MONTHS \$9,490

University of Wisconsin. Green bay

WARPINSKI, JAMES R; AIR POLLUTION AND COMMUNITY HEALTH (Y009613); 12 MONTHS \$9,930

# UNIVERSITY OF WISCONSIN, MADISON

PRATT, LESLIE: EFFECTS OF COOLING WATER DISCHARGE ON THE AQUATIC COMMUNITY IN LAKE MONONA (Y009818); 12 MONTHS \$10,040 NEALIS, PERRY M: EFFECTS OF NOISE ON SOCIAL BEHAVIOR AND CORTICO STERONE LEVELS IN MONKEYS (Y009631); 12 MONTHS \$16,180 CROWE, D W; UNDERGRADUATE RESEARCH PARTICIPATION (Y009906); 11 MONTHS \$14,400

## UNIVERSITY OF WISCONSIN, MILWAUKEE

HUBER, CALVIN O; UNDERGRADUATE RESEARCH PARTICIPATION (Y0098 W), 11 MONTHS \$14,300

CHANG, Y AUSTIN: UNDERGRADUATE RESEARCH PARTICIPATION (Y010005); 11 MONTHS \$5,730

WEISE, CHARLES M; UNDERGRADUATE RESEARCH PARTICIPATION (Y010028); 11 MONTHS \$9,810

# wisconsin State University, Stevens Point

SCHMIDT, STEVEN D; WATER QUALITY AND RECREATION IN LAKE DUBAY AND BIG EAU PLAINE RESERVIOR (YOOSSEI); 12 MONTHS \$16,000

WISCONSIN STATE UNIVERSITY, SUPERIOR

BAHNICK, DONALD A: UNDERGRADUATE RESEARCH PARTICIPA-TION (Y010006): 11 MONTHS \$7,230

### WYOMING

## UNIVERSITY OF WYOMING

DEBOER, ANDREW; UNDERGRADUATE RESEARCH PARTICIPATION (1'009909); 11 MONTHS \$6,300

## GRADUATE LEVEL

## ALABAMA

AUBURN UNIVERSITY

PARKER, W V; GRADUATE TRAINEESHIPS (Econgor); 18 MONTHS \$35,250

university of Alabama, Tuscaloosa

SCOTT, CHARLEY; GRADUATE TRAINEESHIPS (Z002J02); 18 HONTHS \$17,625

## ALASKA

UNIVERSITY OF ALASKA

RAE, K M; GRADUATE TRAINEESHIPS (Zoozgoj); 18 MONTHS \$5,875

#### ARIZONA

ARIZONA STATE UNIVERSITY

BURKE, W J; GRADUATE TRAINEESHIPS (Z001336 002); \$8,019 BURKE, W J; GRADUATE TRAINEESHIPS (ZOORSOL); 18 MONTHS \$58,750

UNIVERSITY OF ARIZONA

BONNEVILLE, FRANK A; GRADUATE TRAINEESHIPS (2001537 002); \$6,296

BONNEVILLE, FRANK A; GRADUATE TRAINEESHIPS (2007303); 18 MONTHS \$99,875

#### ARKANSAS

UNIVERSITY OF ARKANSAS

HARVEY, AUBREY E; GRADUATE TRAINEESHIPS (2004/06); 18 MONTHS \$17,626



#### CALIFORNIA

CALIFORNIA INSTITUTE OF TECHNOLOGY

PINGS, C J; GRADUATE TRAINEESHIPS (Z002307); 18 MONTHS \$141,000

CLAREMONT GRADUATE SCHOOL

RICE, PHILIP M; GRADUATE TRAINEESHIPS (Z002108); 18 MONTHS \$11.750

LOMA LINDA UNIVERSITY

STAUFFER, J PAUL; GRADUATE TRAINEESHIPS (2001511 001); \$240 STAUFFER, J PAUL; GRADUATE TRAINEESHIPS (2002/09); 18 MONTHS \$5,876

STANFORD UNIVERSITY

MOSES, LINCOLN E; GRADUATE TRAINEESHIPS (2004310); 18 MONTHS \$258,500

UNITED STATES INTERNATIONAL UNIVERSITY

RUCKER, W RAY; GRADUATE TRAINEESHIPS (ZOONJII); 18 MONTHS

UNIVERSITY OF CALIFORNIA, BERKELEY

PORTIS, ALAN M; CENTER OF EXCELLENCE IN SCIENCE EDUCA-TION (WOOSBIA'), 14 MONTHS \$20,000

ELBERG, SANFORD S; GRADUATE TRAINEESHIPS (Z002414); 18

UNIVERSITY OF CALIFORNIA, DAYIS

MARR. ALLEN C: GRADUATE TRAINEESHIPS (Z002JIJ); 18 MONTHS \$16,315

UNIVERSITY OF CALIFORNIA, INVINE

LENHOFF, H M; GRADUATE TRAINEESHIPS (Z007J11): 18 MONTHS \$29,375

UNIVERSITY OF CALIFORNIA, LOS ANGELES

CARLISLE, DONALD; GRADUATE TRAINEESHIPS (2004)15); 18 MONTHS \$158.625

UNIVERSITY OF CALIFORNIA, RIVERSIDE

HEWITT, ROBERT R; GRADUATE TRAINEESHIPS (Z001349 004); \$1,682 HEWITT, ROBERT R; GRADUATE TRAINEESHIPS (Z004316); 18 MONTHS \$52 875

UNIVERSITY OF CALIFORNIA, SAN DIEGO

PEARCE, ROY HARVEY; GRADUATE TRAINEESHIPS (2004JIT); 18 MONTHS \$58,750

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

HARPER, HAROLD A; GRADUATE TRAINEESHIPS (ZOUZJIN); 18
MONTHS \$5.875

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

COLLINS, ROBERT O; GRADUATE TRAINEESHIPS (Z002319); 18 MONTHS \$47,000

UNIVERSITY OF CALIFORNIA, SANTA CRUZ

WILLIAMSON, STANLEY M; GRADUATE TRAINEESHIPS (Z001320); 18 MONTHS \$5,875

UNIVERSITY OF SANTA CLARA

PARDEN, ROBERT J; GRADUATE TRAINEESHIPS (Z002J22); 18 MONTHS 45,875

UNIVERSITY OF SOUTHERN CALIFORNIA

MAYO, CHARLES G; GRADUATE TRAINEESHIPS (Z001313); 18 MONTHS \$82,250

UNIVERSITY OF THE PACIFIC

SHAO, OTIS H; GRADUATE TRAINEESHIPS (Z001353 001); \$685 CARLTON, PATRICK W; GRADUATE TRAINEESHIPS (Z002321); 18 MONTHS \$5,815

### COLORADO

COLORADO SCHOOL OF MINES

JORDAN, A RAYMOND; GRADUATE TRAINEESHIPS (2001356 001); \$276 JORDAN, A RAYMOND; GRADUATE TRAINEESHIPS (2002J24); 18 MONTHS \$11,750

COLORADO STATE UNIVERSITY

BRAGONIER, WENDELL H; GRADUATE TRAINEESHIPS (2001557 002); \$2,411

BRAGONIER, WENDELL H; GRADUATE TRAINEESHIPS (2002/125); 18 MONTHS \$58,750

UNIVERSITY OF COLORADO

LOVE, WILLIAM F: GRADUATE TRAINEESHIPS (2004):18 MONTHS \$106,750

UNIVERSITY OF DENVER

EVERS, NATHANIEL H; GRADUATE TRAINEESHIPS (Z002/27): 18 MONTHS \$11,750

WESTERN INTERSTATE COMM FOR HIGHER EDUCATION

HULLINGHORST, ROBERT S; RESOURCES DEVELOPMENT INTERN-SHIP PROGRAM (YOOSIST); 16 MONTHS \$8,935

#### CONNECTICUT

UNIVERSITY OF CONNECTICUT

MALONE, THOMAS F: GRADUATE TRAINEESHIPS (Z008988); 18 MONTHS \$58,750

WESLEYAN UNIVERSITY

KERR, WILLIAM; GRADUATE TRAINEESHIPS (2001561 001); \$334 KERR, WILLIAM; GRADUATE TRAINEESHIPS (2001519); 18 MONTHS

YALE UNIVERSITY

JUSTUSSON, J WILLIAM; GRADUATE TRAINEESHIPS (2004)10); 18 MONTHS \$124375

### DELAWARE

UNIVERSITY OF DELAWARE

BERGELIN, O P; GRADUATE TRAINEESHIPS (Z002J31); 18 MONTHS \$58.150

#### DISTRICT OF COLUMBIA

NONE; OTHER PROGRAM AWARDS (IJAWDS); \$21,458

AMERICAN UNIVERSITY

JOHNSON, JIMMY; CONFERENCE ON THE IMPROVEMENT OF THE CAPABILITIES OF SMALL RESEARCH AND DEVELOPMENT FIRMS IN A DECLINING R & D ENVIRONMENT (ROJESJT); 12 MONTHS \$23,200

BOYNTON, ROBERT P; GRADUATE TRAINEESHIPS (2001544 001); \$1,135 BOYNTON, ROBERT P; GRADUATE TRAINEESHIPS (2002334); 18 MONTHS \$11,750

CATHOLIC UNIVERSITY OF AMERICA

OCONNOR, J P; GRADUATE TRAINEESHIPS (ZOORISI); 18 MONTHS

EXOTECH SYSTEMS INC

EHRMAN, LIBERT; TASK ORDER FOR PROCESSING FY 1911 TRAINEE PERSONAL DATA FORMS (C4/30/8); 10 MONTHS \$10,338

GEORGE WASHINGTON UNIVERSITY

BURNS, ARTHUR E; GRADUATE TRAINEESHIPS (2001366 001); \$2,440 BURNS, ARTHUR E; GRADUATE TRAINEESHIPS (2001314); 18 MONTHS \$35,250

GEORGETOWN UNIVERSITY

PORRECO, ROCCO E: GRADUATE TRAINEESHIPS (2001587 001): \$1,115 PORRECO, ROCCO E: GRADUATE TRAINEESHIPS (2001115): 18 MONTHS \$35,250

HOWARD UNIVERSITY

MILLER, CARROLL L; GRADUATE TRAINEESHIPS (2001568 001); \$1,168 MILLER, CARROLL L; GRADUATE TRAINEESHIPS (2001316); 18 MONTHS \$11,750

NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL HALL, WAYNE C; CONTIEVAL PROC DATA PROCECODING F CERTAIN NATL SCI FUNDATN FELLSHP PROG (CHOI04 007); 12 MONTHS \$42,304

#### FLORIDA

FLORIDA STATE UNIVERSITY

LEWIS, THOMAS R; GRADUATE TRAINEESHIPS (Z0021317); 18 MONTHS \$76,375

**NOVA UNIVERSITY** 

SCIGLIANO, JOHN A; GRADUATE TRAINEESHIPS (Z002138); 18 MONTHS \$5,875

UNIVERSITY OF FLORIDA

SMITH, ALEX G; GRADUATE TRAINEESHIPS (ZOOSIJS); 18 MONTHS \$88,125

UNIVERSITY OF MIAMI

HARRISON, JOHN A; GRADUATE TRAINEESHIPS (ZOONJIO); 18 MONTHS \$35,250

UNIVERSITY OF SOUTH FLORIDA

BRIGGS, JOHN C; GRADUATE TRAINEESHIPS (200151) 001); \$578
ELLIS JR, R W; GRADUATE TRAINEESHIPS (2002141); 18 MONTHS
58875

#### GEORGIA

ATLANTA UNIVERSITY

JARRETT, THOMAS D; GRADUATE TRAINEESHIPS (2001314 001): \$2,042 JARRETT, THOMAS D; GRADUATE TRAINEESHIPS (2003442); 18 MONTHS \$5,675



EMORY UNIVERSITY

LESTER, CHARLES T; EXPERIMENTAL PLANNING-RETRAINING PROJECT FOR THE REORIENTATION OF SCIENTISTS AND TECHNOLOGISTS (2008)54 001°); 6 MONTHS 475,540

LESTER, CHARLES T; GRADUATE TRAINEESHIPS (Z004314); 18

GEORGIA INSTITUTE OF TECHNOLOGY

WEBB, SAM C; GRADUATE TRAINEESHIPS (Z001378 002); \$4,780
RAY, DALE C; GRADUATE TRAINEESHIPS (Z001344); 18 MONTHS
\$94,000

GEORGIA STATE UNIVERSITY

AHEARN, DONALD G; GRADUATE TRAINEESHIPS (200445); 18

MEDICAL COLLEGE OF GEORGIA

BARD, RAYKOND C; GRADUATE TRAINEESHIPS (Z002146); 18 MONTHS \$5.875

UNIVERSITY OF GEORGIA

WHITEE EAD, TH; GRADUATE TRAINEESHIPS (Z002347); 18 MONTHS 452,875

#### HAWAII

UNIVERSITY OF HAWAII

ROSENBERG, MORTON M; GRADUATE TRAINEESHIPS (Z001580 002);

ROSENBERO, MORTON M; GRADUATE TRAINEESHIPS (Zoodyw); 18 MONTHS \$47,000

#### IDAHO

UNIVERSITY OF IDAHO

STARK, RONALD W: GRADUATE TRAINEESHIPS (2001381 001); \$5,223 STARK, R W: GRADUATE TRAINEENHIPS (2001315); 18 MONTHS \$17,625

#### ILUNOIS

**BEPAUL UNIVERSITY** 

CORTELYOU, WILLIAM T: GRADUATE TRAINEESHIPS (Z002/50); 18 MONTHS \$5,875

ILLINOIS INSTITUTE OF TECHNOLOGY

GURALNICK, S A; GRADUATE TRAINEESHIPS (Z002331); 18 MONTHS

ILLINOIS STATE UNIVERSITY

HELGESON, ARLAN C; GRADUATE TRAINEESHIPS (200452): 18 MONTHS \$11,750

LOYOLA UNIVERSITY

MARIELLA, RAYMOND P; GRADUATE TRAINEESHIPS (Z002353); 18 MONTHS \$11,750

NORTHERN ILLINOIS UNIVERSITY

MCILRATH, WAYNE J; GRADUATE TRAINEESHIPS (Z002J34); 18 MONTHS \$11,750

NORTHWESTERN UNIVERSITY

BAKER, ROBERT H; GRADUATE TRAINEESHIPS (2001587 001); \$2,324 BAKER, ROBERT H; GRADUATE TRAINEESHIPS (2002355); 18 MONTHS \$152.750

SOUTHERN ILLINOIS UNIVERSITY - CARBONDALE

OLMSTED, JOHN M. H; GRADUATE TRAINEESHIPS (Z001588 002); \$5,000 OLMSTED, JOHN M. H; GRADUATE TRAINEESHIPS (Z00156); 18 MONTHS \$35,250

UNIVERSITY OF CHICAGO

OCONNELL, CHARLES D; GRADUATE TRAINEESHIPS (Z002337); 18 MONTHS \$117,500

UNIVERSITY OF ILLINOIS AT CHICAGO CIRCLE

OTTING, W J; GRADUATE TRAINEESHIPS (Z003358); 18 MONTHS \$5,875

UNIVERSITY OF ILLINOIS AT THE MEDICAL CENTER

DANIELS, RALPH; GRADUATE TRAINEESHIPS (Z002459); 18 MONTHS \$5,875

UNIVERSITY OF ILLINOIS AT URBANA

CLARK, ROGER G; GRADUATE TRAINEESHIPS (2002360); 18 MONTHS \$258,500

#### INDIANA

INDIANA UNIVERSITY, BLOOMINGTON

LUDLOW, H GLENN; GRADUATE TRAINEESHIPS (Z001581 001); \$291 LUDLOW, H GLENN; GRADUATE TRAINEESHIPS (Z001561); 18 MONTHS \$105,750

PURDUE UNIVERSITY

GIBBENS, VICTOR E; GRADUATE TRAINEENHIPS (Z001594 002); \$6,840 GIBBENS, VICTOR E; GRADUATE TRAINEENHIPS (Z001462); 18 MONTHS \$229,125

UNIVERSITY OF NOTRE DAME

BOTZUM, W A; GRADUATE TRAINEESHIPS (2001595 001); \$2,029 BOTZUM, REV W A; GRADUATE TRAINEESHIPS (2002363); 18 MONTHS \$70,500

#### **NWA**

IOWA STATE UNIVERSITY OF SCIENCE & TECHNOLOGY

ZAFFARANO, D J; GRADUATE TRAINEESHIPS (Z001/64); 18 MONTHS
\$99.815

UNIVERSITY OF IOWA

SPRIESTERSBACH, D C: GRADUATE TRAINEESHIPS (Z001597 002);

SPRIESTERSBACH, D C; GRADUATE TRAINEESHIPS (Z002365); 18 MONTHS \$76235

#### KANSAS

KANSAS STATE UNIVERSITY

NOONAN, JOHN P; GRADUATE TRAINEESHIPS (2008:166), 18 MONTHS \$58,750

UNIVERSITY OF KANSAS

ELLERMEIER, ROBERT D. GRADUATE TRAINEESHIPS (ZOOMIST); 18
MONTHS \$64,625

#### KENTUCKY

UNIVERSITY OF KENTUCKY

CABE, CARL, GRADUATE TRAINEESHIPS (2001600 001); \$6,692 CABE, J CARL, GRADUATE TRAINEESHIPS (200168), 18 MONTHS \$47,000

UNIVERSITY OF LOUISVILLE

ACOATES, GLYNN-D; GRADUATE TRAINEESHIPS (2001601 001); \$108 COATES, GLYNN D; GRADUATE TRAINEESHIPS (2001169); 18 MONTHS \$11,825

#### LOUISIANA

LOUISIANA STATE UNIVERSITY MED CTR NEW ORLEANS
COULSON, ROLAND A; GRADUATE TRAINEESHIPS (Z004474); 18
MONTHS \$5.875

LOUISIANA STATE UNIVERSITY, BATON ROUGE

GOODRICH, MAX; GRADUATE TRAINEESHIPS (2001603 002); \$2,680 GOODRICH, MAX; GRADUATE TRAINEESHIPS (2001171); 18 MONTHS \$58,750

LOUISIANA STATE UNIVERSITY, NEW ORLEANS

BOBO, JAMES R; GRADUATE TRAINEESHIPS (2001605 001); \$331 BOBO, JAMES R; GRADUATE TRAINEESHIPS (2002373); 18 MONTHS \$5,875

LOUISIANA TECH UNIVERSITY

HESTER, JAMES L; GRADUATE TRAINEESHIPS (2001601 001); \$965 HESTER, JAMES L; GRADUATE TRAINEESHIPS (2002170); 18 MONTHS \$5,875

LOYOLA UNIVERSITY

DIMAGGIO III, ANTHONY; GRADUATE TRAINEESHIPS (2002174); 18
MONTHS \$5,875

TULANE UNIVERSITY

DEENER, DAVID R: GRADUATE TRAINEESHIPS (2002)73); 18 MONTHS

### MAINE

UNIVERSITY OF MAINE, ORONO

EGGERT, FRANKLIN P. GRADUATE TRAINEESHIPS (Z002376); 18
MONTHS \$11,750

### MARYLAND

NONE; OTHER PROGRAM AWARDS (07AWDS); \$5,372

JOHNS HOPKINS UNIVERSITY

JOHNSON, KENNETH E; GRADUATE TRAINEESHIPS (Z002177); 18 MONTHS 188,125

UNIVERSITY OF MARYLAND, COLLEGE PARK

JR, MICHAEL J PELCZAR; GRADUATE TRAINEESHIPS (Z602178); 18
MONTHS \$70,500

### MASSACHUSETTS

BOSTON COLLEGE

FEENEY, WALTER J; GRADUATE TRAINEESHIPS (2002); 18 MONTHS \$11,625

BOSTON UNIVERSITY

KUBZANSKY, PHILIP E: GRADUATE TRAINEESHIPS (ZOOJJAO): 18 MONTHS \$29,375



#### BRANDEIS UNIVERSITY

BLACK, EUGENE C; GRADUATE TRAINEESHIPS (2004)81); 18 MONTHS \$41,125

#### CLARK UNIVERSITY

AHMADJIAN, VERNON; GRADUATE TRAINEESHIPS (2001614 001); \$240 AHMADGIAN, VERNON; GRADUATE TRAINI ESHIPS (200161); 18 MONTHS \$11.625

### HARVARD UNIVERSITY

SISSON, THOMAS K; GRADUATE TRAINEESHIPS (Z004381); 18 MONTHS \$106,750

### LOWELL TECHNOLOGICAL INSTITUTE

ALEXANDER, EDWARD L; GRADUATE TRAINEESHIPS (2001616 001);

ALEXANDER, EDWARD L; GRADUATE TRAINEESHIPS (Z002023 001);

ALEXANDER, EDWARD L; GRADUATE TRAINEESHIPS (2004)84), 18 MONTHS \$5,878

## MASSACHUSETTS INSTITUTE OF TECHNOLOGY

STONE, RONALD S; GRADUATE TRAINEESHIPS (2004333); 18 MONTHS \$287,875

### NORTHEASTERN UNIVERSITY

ESSIGMANN, MARTIN W: GRADUATE TRAINEESHIPS (Z002386); 18 MONTHS \$47,000

### TUFTS UNIVERSITY

MCCARTHY, KATHRYN A: GRADUATE TRAINEESHIPS (Z001387); 18 MONTHS \$29,375

### UNIVERSITY OF MASSACHUSETTS, AMHERST

CENTILE, ARTHUR C; GRADUATE TRAINEESHIPS (2001610 002); \$2,140 GENTILE, ARTHUR C; GRADUATE TRAINEESHIPS (200188); 18 MONTHS \$58,760

#### WORCESTER POLYTECHNIC INSTITUTE

SHIPMAN, C W; GRADUATE TRAINEESHIPS (ZOOLISS); 18 MONTHS \$5,875

#### MICHIGAN

#### MICHIGAN STATE UNIVERSITY

MINKEL, C W; GRADUATE TRAINEESHIPS (Z002190); 18 MONTHS 1141,000

## MICHIGAN TECHNOLOGICAL UNIVERSITY

YERG, DDNALD G; GRADUATE TRAINTESHIPS (Z001814 001): \$3,833 YERG, DONALD G; GRADUATE TRAINEESHIPS (Z001891): 18 MONTHS 117,625

### UNIVERSITY OF DETROIT

MERLENBACHER, LYLE E; GRADUATE TRAINEESHIPS (2001392): 18 MONTHS \$11,750

### UNIVERSITY OF MICHIGAN

HAY, O E; GRADUATE TRAINEESHIPS (Z002J9J); 18 MONTHS \$210,250 WAYNE STATE UNIVERSITY

BURNHAM, FREDERIC B; GRADUATE TRAINEENHIPS (ZOOLI94); 18 MONTHS 458-150

#### WESTERN MICHIGAN UNIVERSITY

MALLINSON, GEORGE G: GRADUATE TRAINEESHIPS (Z003J95); 18 NONTHS \$5.875

#### MINNESOTA

### UNIVERSITY OF MINNESOTA

CRAWFORD JR, BRYCE; GRADUATE TRAINEESHIPS (Z001396); 18 MONTHS \$164,500

### MISSISSIPPI

### MISSISSIPPI STATE UNIVERSITY

LOFTON, MARION T; GRADUATE TRAINEESHIPS (Z001629 001); \$28 LOFTIN, MARION T; GRADUATE TRAINEESHIPS (Z002197); 18 MONTHS \$17,625

# UNIVERSITY OF MISSISSIPPI

SAM, JOSEPH; GRADUATE TRAINEESHIPS (2001610 001); \$3,727 SAM, JOSEPH; GRADUATE TRAINEESHIPS (200198); 1E MONTHS \$11,625

### UNIVERSITY OF SOUTHERN MISSISSIPPI

VAN ALLER, ROBERT T; GRADUATE TRAINEESHIPS (2001611 001); \$2,200

VAN ALLER, R T; GRADUATE TRAINEESHIPS (Z002J95); 18 MONTHS

### MISSOURI

### ST LOUIS UNIVERSITY

BRENNAN, FRANCIS C (REV); GRADUATE TRAINEESHIPS (2001632 001); \$908

BRENNAN, F C; GRADUATE TRAINEESHIPS (2002400); 18 MONTHS \$17,625

### UNIVERSITY OF MISSOURI, COLUMBIA

ANDERSON, DONALD K JR; GRADUATE TRAINEESHIPS (2001818 002); \$3,945

ANDERSON JR, D &; GRADUATE TRAINEESHIPS (2001401); 18 MON1HS \$88,125

## UNIVERSITY OF MISSOURI, KANSAS CITY

DALE, WESLEY J; GRADUATE TRAINEESHIPS (Z001634 001); \$1,771 DALE, WESLEY J; GRADUATE TRAINEESHIPS (Z001409); 18 MONTHS \$5,875

### UNIVERSITY OF MISSOURI, ROLLA

MCFARLAND, ROBERT H; GRADUATE TRAINEESHIPS (Z001835 00F); \$10,281

MCFARLAND, ROBERT H; GRADUATE TRAINEESHIPS (2001403); 18 MONTHS 141,125

#### WASHINGTON UNIVERSITY

MORROW, RALPH E; GRADUATE TRAINEESHIPS (2001616 001); \$4,231 MORROW, RALPH E; GRADUATE TRAINEESHIPS (2009101); 18 MONTHS \$88,125

### MONTANA

### MONTANA STATE UNIVERSITY

GOERING, KENNETH J: GRADUATE TRAINEESHIPS (2001837 002);

GOERING, K J; GRADUATE TRAINEESHIPS (2001405): 18 MONTHS \$35,250

### UNIVERSITY OF MONTANA

STEWART, JOHN M; GRADUATE TRAINEESHIPS (2001638 001); \$734 STEWART, JOHN M; GRADUATE TRAINEESHIPS (2002406); 18 MONTHS \$5,875

#### NEBRASKA

## University of Nebraska at Lincoln

DREW, JAMES V: GRADUATE TRAINEESHIPS (2001407); 18 MONTHS \$41,125

#### NEVADA

## UNIVERSITY OF NEVADA, RENO

O'BRIEN, T D; GRADUATE TRAINEESHIPS (2001640 001); \$2,530 OBRIEN, T D; GRADUATE TRAINEESHIPS (2002408); 18 MONTHE \$11,750

### **NEW HAMPSHIRE**

### DARTMOUTH COLLEGE

HORNIG, JAMES F; GRADUATE TRAINEESHIPS (20016\$1 001); \$1,161 HORNIG, JAMES F; GRADUATE TRAINEESHIPS (2001409); 18 MONTHS \$17,625

### UNIVERSITY OF NEW HAMPSHIRE, DURHAM

DREW, WILLIAM H: GRADUATE TRAINEESHIPS (ZOGILIO): 18 MONTHS \$35,250

#### **NEW JERSEY**

### EDUCATIONAL TESTING SERVICE

WILTSEY, ROBERT G; TESTING PROGRAM FOR FY-1913 GRADUATE FELLOWSHIP APPLICANTS (C616000 002); 12 MONTHS \$28,855

### NEWARK COLLEGE OF ENGINEERING

BEDROSIAN, ALEX; GRADUATE TRAINEESHIPS (Z002411); 18 MONTHS \$5,875

### PRINCETON UNIVERSITY

EDENFIELD, EDWARD J; GRADUATE TRAINEESHIPS (2001844 001); \$3,315

EDENFIELD, EDWARD J; GRADUATE TRAINEESHIPS (Z007412); 18 MONTHC \$117,500

## RUTGERS UNIVERSITY

TORREY, HENRY C; GRADUATE TRAINEESHIPS (Z002413); 18 MONTHS \$76,375

### SETON HALL UNIVERSITY

CONNOR, JOSEPH G; GRADUATE TRAINEESHIPS (Z002414); 18 MONTH: \$5,875

### STEVENS INSTITUTE OF TECHNOLOGY

BOOTH, EUGENE T; GRADUATE TRAINEESHIPS (2001647 008); \$1,299 BOOTH, EUGENE T; GRADUATE TRAINEESHIPS (2001415); 18 MONTHS \$41,125



#### RANDEIS UNIVERSITY

BLACK, EUGENE C; GRADUATE TRAINEESHIFS (ZOOMISI); 18 MONTHS 11,126

#### LARK UNIVERSITY

AHMADJIAN, VERNON; GRADUATE TRAINEESHIPS (Z001614 001); \$240 AHMADGIAN, VERNON; GRADUATE TRAINEESHIPS (Z002/38); 18 ONTHS \$17,626

#### ARVARD UNIVERSITY

SISSON, THOMAS K; GRADUATE TRAINEESHIPS (Z004384); 18 MONTHS 106,750

#### OWELL TECHNOLOGICAL INSTITUTE

ALEXANDER, EDWARD L; GRADUATE TRAINEESHIPS (2001616 001);

ALEXANDER, EDWARD L; GRADUATE TRAINEESHIPS (Z002024 001);

ALEXANDER, EDWARD L; GRADUATE TRAINEESHIPS (Z002384): 18 ONTHS \$5,875

#### ASSACHUSETTS INSTITUTE OF TECHNOLOGY

STONE, RONALD S; GRADUATE TRAINEESHIPS (Zooldes): 18 MONTHS 191,816

#### ORTHEASTERN UNIVERSITY

ESSIGMANN, MARTIN W; GRADUATE TRAINEESHIPS (ZOOLJSE); 18 ONTHS \$47,000

## UPTS UNIVERSITY

MCCARTHY, KATHRYN A; GRADUATE TRAINEESHIPS (ZOOZJET); 18 ONTHS \$29.375

#### NIVERSITY OF MASSACHUSETTS, AMHERST

GENTILE, ARTHUR C; GRADUATE TRAINEESHIPS (Z001640 002); \$2,140
GENTILE, ARTHUR C; GRADUATE TRAINEESHIPS (Z002388); 18
ONTHS \$38,750

#### ORCESTER POLYTECHNIC INSTITUTE

SHIPMAN, C W; GRADUATE TRAINEESHIPS (Z002389); 18 MONTHS

#### MICHIGAN

#### ICHIGAN STATE UNIVERSITY

MINKEL, C W; GRADUATE TRAINEESHIPS (Z002190): 18 MONTHS

### ICHIGAN TECHNOLOGICAL UNIVERSITY

YERG. DONALD G; GRADUATE TRAINEESHIPS (Z001613 001); \$3,833 YERG, DONALD G; GRADUATE TRAINEESHIPS (Z001391); 18 MONTHS 17.625

### NIVERSITY OF DETROIT

MEHLENBACHER, LYLE E; GRADUATE TRAINEESHIPS (Z001J91); 18 ONTHS \$11,750

## NIVERSITY OF MICHIGAN

HAY, G E; GRADUATE TRAINEESHIPS (Z002191); 18 MONTHS \$270,250

### 'AYNE STATE UNIVERSITY

BURNHAM, FREDERIC B; GRADUATE TRAINEESHIPS (Z002J94); 18 ONTHS \$58,750

### ESTERN MICHIGAN UNIVERSITY

MALLINSON, GEORGE G; GRADUATE TRAINEESHIPS (Z002J95); 18 ONTHS \$5.875

### MINNESOTA

### NIVERSITY OF MINNESOTA

CRAWFORD JR, BRYCE: GRADUATE TRAINEESHIPS (Z002196); 18 ONTHS \$154,500

### MISSISSIPPI

#### ISSISSIPPI STATE UNIVERSITY

LOFTON, MARION T; GRADUATE TRAINEESHIPS (Z001629 001); \$28 LOFTIN, MARION T; GRADUATE TRAINEESHIPS (Z00197); 18 MONTHS (7.625

#### NIVERSITY OF MISSISSIPPI

SAM, JOSEPH; GRADUATE TRAINEESHIPS (2001630 001); \$3,727 SAM, JOSEPH; GRADUATE TRAINEESHIPS (2002398); 18 MONTHS 7.625

#### NIVERSITY OF SOUTHERN MISSISSIPPI

VAN ALLER, ROBERT T; GRADUATE TRAINEESHIPS (2001641 001):

VAN ALLER, R T; GRADUATE TRAINEESHIPS (Z003399); 18 MONTHS ,875

#### MISSOURI

#### ST LOUIS UNIVERSITY

BRENNAN, FRANCIS C (REV); GRADUATE TRAINEESHIPS (2001652 001); \$908

BRENNAN, F C; GRADUATE TRAINEESHIPS (2002400); 18 MONTHS \$17,625

### UNIVERSITY OF MISSOURI. COLUMBIA

ANDERSON, DONALD K JR; GRADUATE TRAINEESHIPS (Z0016JJ 002); \$3,945

ANDERSON JR, D K; GRADUATE TRAINEESHIPS (2002401): 18 MONTHS \$88,125

### UNIVERSITY OF MISSOURI. KANSAS CITY

DALE, WESLEY J; GRADUATE TRAINEESHIPS (2001434 001); \$1,771 DALE, WESLEY J; GRADUATE TRAINEESHIPS (2001407); 18 MONTHS 45,875

### UNIVERSITY OF MISSOURI, ROLLA

MCFARLAND, ROBERT H; GRADUATE TRAINEESH!PS (Z001635 002); \$10,231

MCFARLAND, ROBERT H; GRADUATE TRAINEESHIPS (Z003403); 18 MONTHS \$41,126

#### WASHINGTON UNIVERSITY

MORROW, RALPH E; GRADUATE TRAINEESHIPS (2001616 001); 14,231 MORROW, RALPH E; GRADUATE TRAINEESHIPS (2001401); 18 MONTHS 88,125

#### MONTANA

#### MONTANA STATE UNIVERSITY

GOERING, KENNETH J; GRADUATE TRAINEESHIPS (200:637 001); \$4,667

GOERING, K J; GRADUATE TRAINEESHIPS (Z003403); 18 MONTHS \$35,250

#### UNIVERSITY OF MONTANA

STEWART, JOHN M; GRADUATE TRAINEESHIPS (Z001438 001); \$734 STEWART, JOHN M; GRADUATE TRAINEESHIPS (Z002406); 18 MONTHS \$5,875

### NEBRASKA

UNIVERSITY OF NEBRASKA AT LINCOLN

DREW, JAMES V; GRADUATE TRAINEESHIPS (Z003407); 18 MONTHS \$41,125

#### NEVADA

### UNIVERSITY OF NEVADA, RENO

O'BRIEN, T D; GRADUATE TRAINEESHIPS (2001640 001); \$2,530 OBRIEN, T D; GRADUATE TRAINEESHIPS (2001408); 18 MONTHS \$11,750

### NEW HAMPSHIRE

#### DARTMOUTH COLLEGE

HORNIG, JAMES F; GRADUATE TRAINEESHIPS (2001641 001); \$1,161 HORNIG, JAMES F; GRADUATE TRAINEESHIPS (2001409); 18 MONTHS \$17,625

### UNIVERSITY OF NEW HAMPSHIRE, DURHAM

DREW, WILLIAM H; GRADUATE TRAINEESHIPS (2002410); 18 MONTHS \$35,250

### **NEW JERSEY**

## EDUCATIONAL TESTING SERVICE

WILTSEY, ROBERT G; TESTING PROGRAM FOR FY-1973 GRADUATE FELL( VSHIP APPLICANTS (C626000 002); 12 MONTHS \$28,855

### NEWARK COLLEGE OF ENGINEERING

BEDP ISIAN, ALEX; GRADUATE TRAINEESHIPS (Z002411); 18 MONTHS \$5,875

### PRINCETON UNIVERSITY

EDENFIELD, EDWARD J; GRADUATE TRAINEESHIPS (2001644 001); \$3,316

EDENFIELD, EDWARD J; GRADUATE TRAINEESHIPS (2002412): 18 MONTHS \$117,500

### RUTGERS UNIVERSITY

TORREY, HENRY C; GRADUATE TRAINEESHIPS (Z002413): 18 MONTHS \$76,375

### SETON HALL UNIVERSITY

CONNOR, JOSEPH G; GRADUATE TRAINEESHIPS (Z002414); 18 MONTHS \$5,875

#### STEVENS INSTITUTE OF TECHNOLOGY

BOOTH, EUGENE T; GRADUATE TRAINEESHIPS (Z001641 001); \$1,299 BOOTH, EUGENE T; GRADUATE TRAINEESHIPS (Z0024115); 18 MONTHS \$41,125



#### NEW MEDICO

NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY

WILKENING, MARVIN H; GRADUATE TRAINEESHIPS (2001848 001);

WILKENING, MARVIN H; GRADUATE TRAINEESHIPS (2004)16); 18 MONTHS \$5.875

### NEW MEXICO STATE UNIVERSITY

THOMPSON, MERRELL E; GRADUATE TRAINEESHIPS (Z001649 00r);

THOMPSON, MERRELL E; GRADUATE TRAINEESHIPS (2001417); 18 MONTHS \$35.250

#### UNIVERSITY OF NEW MEXICO

KASNER, EDMUND B; GRADUATE TRAINEESHIPS (Z002418); 18 MONTHS 847,000

#### **NEW YORK**

#### ADELPHI UNIVERSITY

KONIGSBERG, EVELYN; GRADUATE TRAINEESHIPS (Z004419); 18 MONTHS \$8.575

#### ALPRED UNIVERSITY

BUTLER, LEWIS C; GRADUATE TRAINEESHIPS (2001852 001); \$900 BUTLER, LEWIS C; GRADUATE TRAINEESHIPS (200140); 18 MONTHS \$5875

#### CITY UNIVERSITY OF NEW YORK SYSTEM OFFICE

ZUPNICK, ELLIOT; GRADUATE TRAINEESHIPS (ZOOLIS); 18 MONTHS

#### CLARKSON COLLEGE OF TECHNOLOGY

DONARUMA, L QUY; GRADUATE TRAINEESHIPS (2001654 001); \$1,392 DONARUMA, L GUY; GRADUATE TRAINEESHIPS (2001447); 18 MONTHS 829 378

### COLLEGE OF ENVIRONMENTAL SCIENCE AND FORESTRY

WEBS, WILLIAM L; GRADUATE TRAINEESHIPS (Z001670 001); \$1,584 WEBS, WILLIAM L; GRADUATE TRAINEESHIPS (Z001438); 18 MONTHS \$17,525

#### COLUMBIA UNIVERSITY

ROBEY, RICHARD C; GRADUATE TRAINEESHIPS (ZOORIAS); 18 MONTHS \$164,500

#### COOPER UNION

WALLACE, F A; GRADUATE TRAINEESHIPS (200844); 18 MONTHS \$5.875

#### CORNELL UNIVERSITY

LEURGANS, PAUL J; GRADUATE TRAINEESHIPS (Z007425), 18 MONTHS \$182,125

### DOWNSTATE MEDICAL CENTER AT BROOKLYN

BROOKS, CHANDLER MCC; GRADUATE TRAINEESHIPS (Z001671 001); \$531

BROOKS, CHANDLER MCC; GRADUATE TRAINEESHIPS (Z002139); 18 MONTHS \$5,875

#### FORDHAM UNIVERSITY

FINLAY, JAMES C; GRADUATE TRAINEESHIPS (2002(26); 18 MONTHS

### NEW SCHOOL FOR SOCIAL RESEARCH

GREENBAUM, JOSEPH J; GRADUATE TRAINEESHIPS (2002197); 18 MONTHS \$11,750

### NEW YORK MEDICAL COLLEGE

TABACHNICK, MILTON; GRADUATE TRAINEESHIPS (Z002428); 18 MONTHS \$5.875

#### NEW YORK UNIVERSITY

CHUSID, MARTIN; GRADUATE TRAINEESHIPS (2002439); 18 MONTHS \$123,975

### POLYTECHNIC INSTITUTE OF BROOKLYN

GIORDANO, A B; GRADUATE TRAINEESHIPS (2002450); 18 MONTHS \$82.250

### RENSSELAER POLYTECHNIC INSTITUTE

WIBERLEY, STEPHEN E; GRADUATE TRAINEESHIPS (Z004451); 18 MONTHS \$76,375

#### ROCKEPELLER UNIVERSITY

CONNELLY, CLARENCE M; GRADUATE TRAINEESHIPS (2001684 001); \$40

CONNELLY, CLARENCE M; GRADUATE TRAINEESHIPS (Z002432); 18 MONTHS \$5,875

### ST BONAVENTURE UNIVERSITY

ANDERSON, KENNETH E; GRADUATE TRAINEESHIPS (Z009435); 18 MONTHS 65,675

#### ST JOHNSS UNIVERSITY

MEDICI, PAUL T: GRADUATE TRAINEESHIPS (ZOOLUI); 18 MONTHS 811.760

### STATE UNIVERSITY AT ALBANY

SAIMOND, PAUL A; GRADUATE TRAINEESHIPS (Z001667 001); \$4,268 SALKEVER, LOUIS R; GRADUATE TRAINEESHIPS (Z004415); 18 MONTHS 48476

#### STATE UNIVERSITY AT BINGHAMTON

RUNTER, HUGH E; GRADUATE TRAINEESHIPS (ZOOISS COI); \$1,784
HALL, WAYNE C; GRADUATE TRAINEESHIPS (ZOOISS); 18 MONTHS
\$2,875

#### STATE UNIVERSITY AT BUFFALO

HOLT, ANDREW W; GRADUATE TRAINEESHIPS (2001666 004); \$10,288 HOLT, ANDREW W; GRADUATE TRAINEESHIPS (2001 WT); 18 MONTHS \$70,600

#### STATE UNIVERSITY AT STONY BROOK

WEISINGER, HERBERT; GRADUATE TRAINEESHIPS (2001818 008); \$1,662

WEISINGER, HERBERT: GRADUATE TRAINEESHIPS (2004140): 18 MONTHS \$35,250

#### SYRACUSE UNIVERSITY

HOUGH, W HOWARD; GRADUATE TRAINEESHIPS (Z004149); 18 MONTHS \$88,125

#### UNION COLLEGE

PALMER, J D. GRADUATE TRAINEESHIPS (ZOOI675 001): \$102

#### UNION COLLEGE AND UNIVERSITY SYSTEM OFFICE

WEIFENBACH, WILLIAM; GRADUATE TRAINEESHIPS (2004447); 18 MONTHS \$8,875

#### UNIVERSITY OF ROCHESTER

SPRAGG, S D S; GRADUATE TRAINEESHIPS (Z001616 008); \$2,901
SPRAGG, S D S; GRADUATE TRAINEESHIPS (Z001411); 18 MONTHS
\$88,125

### UPSTATE MEDICAL CENTER AT SYRACUSE

JACOBS, ROSS D; GRADUATE TRAINEESHIPS (2002441); 18 MONTHS \$5,815

#### YESHIVA UNIVERSITY

GITTLER, JOSEPH B; GRADUATE TRAINEESHIPS (2009145); 18 MONTHS \$17,625

#### NORTH CAROLINA

#### **DUKE UNIVERSITY**

HARMAN, C M; GRADUATE TRAINEESHIPS (Z004446); 18 MONTHS \$58,760

### NORTH CAROLINA STATE UNIVERSITY AT RALEIGH

PETERSON, WALTER J; GRADUATE TRAINEESHIPS (2001619 001); \$916
PETERSON, WALTER J; GRADUATE TRAINEESHIPS (2001417); 18
MONTHS \$99,875

### UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

FLORA, JOSEPH M; GRADUATE TRAINEESHIPS (2001480 002); \$6,099 FLORA, JOSEPH M; GRADUATE TRAINEESHIPS (200148); 18 MONTHS \$76,375

#### WAKE FOREST UNIVERSITY

STROUPE, HENRY S; GRADUATE TRAINEESHIPS (Z002; 4): 18
MONTHS \$17.625

#### **NORTH DAKOTA**

### NORTH DAKOTA STATE UNIVERSITY

SMITH, GLENN S; GRADUATE TRAINEESHIPS (Z002430); 18 MONTHS

### UNIVERSITY OF NORTH DAKOTA

JOHNSON, A WILLIAM; GRADUATE TRAINEESHIPS (200168) 001); \$3,547 JOHNSON, A WILLIAM; GRADUATE TRAINEESHIPS (2001431); 18 MONTHS \$17,625

#### OHIO

#### BOWLING GREEN STATE UNIVERSITY

MARSO, RONALD N; GRADUATE TRAINEESHIPS (2001884 001); \$945 MARSO, RON; GRADUATE TRAINEESHIPS (2002458); 18 MONTHS \$11,750

### Case Western Reserve University

HURLEY, FRANK H; GRADUATE TRAINEESHIPS (2001635 001); \$6,288 HURLEY, FRANK H; GRADUATE TRAINEESHIPS (2002459); 18 MONTHS \$117.500

### XENT STATE UNIVERSITY

WHITE, JOHN; GRADUATE TRAINEESHIPS (Z002154); 18 MONTHS \$17,625



#### MIAMI UNIVERSITY

WOLVERTON, ROBERT E; GRADUATE TRAINEESHIPS (2004155); 18 MONTHS 85.878

### OHIO STATE UNIVERSITY

ROADEN, ARLISS L; GRADUATE TRAINEESHIPS (ZOO2436); 18 MONTHS 1152,750

#### OHIO UNIVERSITY

COHN, NORMAN S; GRADUATE TRAINEESHIPS (Z001689 001); \$311 COHN, NORMAN S; GRADUATE TRAINEESHIPS (Z002457); 18 MONTHS \$17.625

#### UNIVERSITY OF AKRON

RZASA, MICHAEL J; GRADUATE TRAINEESHIPS (2003458): 18 MONTHS 15,875

#### UNIVERSITY OF CINCINNATI

WESSEL, ROBERT H; GRADUATE TRAINEESHIPS (Z001691 002); \$855 WESSEL, ROBERT H; GRADUATE TRAINEESHIPS (Z0014/9); 18 MONTHS \$47,000

#### UNIVERSITY OF DAYTON

STANDER, JOSEPH W; GRADUATE TRAINEESHIPS (Z001460); 18 MONTHS \$5.875

### UNIVERSITY OF TOLEDO

TURIN, JOHN J; GRADUATE TRAINEESHIPS (Z00169J 001); \$2,428
TURIN, JOHN J; GRADUATE TRAINEESHIPS (Z003461); 18 MONTHS
18815

#### OKLAHOMA

#### OKLAHOMA STATE UNIVERSITY

DURHAM, NORMAN N; GRADUATE TRAINEESHIPS (Z001694 002);

#### UNIVERSITY OF OKLAHOMA

CRIM, ED F JR; GRADUATE TRAINEESHIPS (Z001693 004); \$5,536

CRIM JR, ED F; GRADUATE TRAINEENHIPS (Z002483); 18 MONTHS \$58,750

OKLAHOMA STATE UNIVERSITY AGRICULTURAL EXPERIMENT STATION

DURHAM, NORMAN N; GRADUATE TRAINEESHIPS (Z001462): 18 MONTHS \$64,625

#### OREGON

### OREGON GRADUATE CENTER FOR STUDY & RESEARCH

SCOTT, ARTHUR F: GRADUATE TRAINEESHIPS (Z001636 001); \$880 SCOTT, ARTHUR F: GRADUATE TRAINEESHIPS (Z001464); 18 MONTHS \$5,875

### OREGON STATE UNIVERSITY

HANSEN, HENRY P; GRADUATE TRAINEESHIPS (2001697 002); \$13,552 BOND, CARL; GRADUATE TRAINEESHIPS (2002468); 18 MONTHS \$58,750

### PORTLAND STATE UNIVERSITY

HARRIS, J KENNETH; GRAD! ATE TRAINEESHIPS (2001698 001); \$471 CLARK, DAVID T; GRAD! ATE TRAINEESHIPS (200166); 18 MONTHS \$5,875

# UNIVERSITY OF OREGON - EUGENE

FISK, CALVIN W; GRADUATE TRAINEESHIPS (2001699 001); \$6,209 FISK, CALVIN W; GRADUATE TRAINEESHIPS (200167); 18 MONTHS \$52,875

### UNIVERSITY OF PORTLAND

KEHOE, JA; GRADITATE TRAINEESHIPS (Zoutico col); \$2,240 OBRIEN, MICHAEL G; GRADITATE TRAINEESHIPS (Zoo1468); 18 MONTHS \$5,875

### **PENNSYLVANIA**

### BRYN MAWR COLLEGE

FOSTER, ELIZABETH R; GRADUATE TRAINEESHIPN (2001469); 18 MONTHS \$5,875

### CARNEGIE-MELLON UNIVERSITY

SCHATZ, EDWARD R; GRADUATE TRAINEENHIPS (Z002470); 18 MONTHS \$99,875

### DREXEL UNIVERSITY

WITZELL, O W; GRADUATE TRAINEESHIPS (2001703-001); \$1,476 WITZELL, O W; GRADUATE TRAINEESHIPS (2001471); 18 MONTHS \$17,625

#### DUQUESNE UNIVERSITY

GROSS, FRANZ B; GRADUATE TRAINEESHIPS (2001704 001); \$836 GROSS, FRANZ B; GRADUATE TRAINEESHIPS (2001412); 18 MONTHS

### BAHNEMANN MEDICAL COLLEGE AND HOSPITAL

BONDI, A; GRADUATE TRAINEESHIPS (Z001471); 18 MONTHS \$5,875

#### LEHIGH UNIVERSITY

STOUT. ROBERT D; GRADUATE TRAINEESHIPS (Z002475); 18 MONTHS \$52.875

### MEDICAL COLLEGE OF PENNSYLVANIA

COLDMAN, DAVID E; GRADUATE TRAINEESHIPS (Z002478): 18 MONTHS \$5,876

#### PENNSYLVANIA STATE UNIVERSITY

HOWELL JR, B F; GRADUATE TRAINEESHIPS (2008477); 18 MONTHS \$158,625

#### PHILADELPHIA COLLEGE OF PHARMACY AND SCIENCE

REBER, LOUIS A; GRADUATE TRAINEESHIPS (Z001109 001); \$822 REBER, LOUIS A; GRADUATE TRAINEESHIPS (Z001478); 18 MONTHS \$5.815

### TEMPLE UNIVERSITY

EBERSOLE, MARK C; GRADUATE TRAINEESHIPS (Z002479); 18 MONTHS \$35,250

#### THOMAS JEFFERSON UNIVERSITY HOSPITAL

BALDRIDGE, ROBERT C; GRADUATE TRAINERSHIPS (Z001474); 18 MONTHS \$5.875

#### UNIVERSITY OF PENNSYLVANIA

OKANE, DJ; GRADUATE TRAINEESHIPS (2003480): 18 MONTHS \$135,125

#### UNIVERSITY OF PITTSBURGH

MCCOY, R H; GRADUATE TRAINEESHIPS (2001712 001); \$9,918 MCCOY, R H; GRADUATE TRAINEESHIPS (2001421); 18 MONTHS \$76,375

#### VILLANOVA UNIVERSITY

BUFORD, ALBERT H; GRADUATE TRAINEESHIPS (Z002482); 18 MONTHS \$5.875

#### RHODE ISLAND

### BROWN UNIVERSITY

BRENNAN, MICHAEL J; GRADUATE TRAINEESHIPS (Z004483); 18 MONTHS \$76.375

#### PROVIDENCE COLLEGE

GALKOWSKI, THEODORE T; GRADUATE TRAINEESHIPS (Z004484); 18 MONTHS \$5.875

#### UNIVERSITY OF RHODE ISLAND

MICHEL, ALOYS A; GRADUATE TRAINEESHIPS (ZOGZ485); 18 MONTHS \$17,625

#### SOUTH CAROLINA

### CLEMSON UNIVERSITY

SCHWARTZ, A E; GRADUATE TRAINEESHIPS (2001118 001); \$2,659 SCHWARTZ, A E; GRADUATE TRAINEESHIPS (2001186); 18 MONTHS \$47,000

### MEDICAL UNIVERSITY OF SOUTH CAROLINA

KINARD, F W; GRADUATE TRAINEESHIPS (2001719 001); \$99 KINARD, F W; GRADUATE TRAINEESHIPS (2002487); 18 MONTHS \$5,815

### UNIVERSITY OF SOUTH CAROLINA

DAVIS, H W; GRADUATE TRAINEESHIPS (Z002488); 18 MONTHS \$17,625

### SOUTH DAKOTA

### SOUTH DAKOTA SCHOOL OF MINES AND TECHNOLOGY

GRIES, JOHN PAUL; GRADUATE TRAINEESHIPS (2001741 001); \$167 GRIES, J P; GRADUATE TRAINEESHIPS (2002489); 18 MONTHS \$5,875

### SOUTH DAKOTA STATE UNIVERSITY

BAILEY, H S; GRADUATE TRAINEESHIPS (2001722 001); \$919
BAILEY, H S; GRADUATE TRAINEESHIPS (2001490): 18 MONTHS \$17,625
UNIVERSITY OF SOUTH DAKOTA

COBB, HENRY V; GRADUATE TRAINEESHIPS (Z00171) 001); \$1,937 COBB, HENRY V; GRADUATE TRAINEESHIPS (Z002491); 18 MONTHS \$11,750

#### TENNESSEE

#### GEORGE PEABODY COLLEGE FOR TEACHERS

TOMLINSON, GUS; GRADUATE TRAINEESHIP, (2002492); 18 MONTHS 45.876

#### MEMPHIS STATE UNIVERSITY

RICHARDSON, JOHN W; GRADUATE TRAINEESHIPS (2001725 001); \$175 RICHARDSON, JOHN W; GRADUATE TRAINEESHIPS (2002191); 18 MONTHS \$5,875

#### UNIVERSITY OF TENNESSEE MED UNITS AT MEMPHIS

ALDEN, ROLAND H; GRADUATE TRAINEESHIPS (2001727 001); \$825 ALDEN, ROLAND H; GRADUATE TRAINEESHIPS (2002495); 18 MONTHS \$5,875

### UNIVERSITY OF TENNESSEE, KNOXVILLE

SMITH, HILTON A; GRADUATE TRAINEESHIPS (Z001746 002); \$1,343



SMITH, HILTON A; GRADUATE TRAINEESHIPS (2004-04); 18 MONTHS

### VANDERBILT UNIVERSITY

THUNE, LELAND E; GRADUATE TRAINESSHIPS (Z001788 004); \$5,243
THUNE, LELAND E; GRADUATE TRAINEESHIPS (Z004496); 18 MONTHS
884750

#### TEYAS

### BAYLOR COLLEGE OF MEDICINE

MELNICK, JOSEPH L; GRADUATE TRAINEESHIPS (2004,198); 18 MONTHS 48,874

#### BAYLOR UNIVERSITY

TOLAND, WILLIAM G; GRADUATE TRAINEESHIPS (2001/129 001); \$2,035 TOLAND, WILLIAM G; GRADUATE TRAINEESHIPS (2001/197); 18 MONTHS \$5815

#### NORTH TEXAS STATE UNIVERSITY

TOULOUSE, ROBERT B; GRADUATE TRAINEESHIPS (20017JI 001); \$665 TOULOUSE, ROBERT B; GRADUATE TRAINEESHIPS (2001499); 18 MONTHS \$11.750

#### RICE UNIVERSITY

RICHTER, G H; GRADUATE TRAINEESHIPS (Z002500); 18 MONTHS \$64,625

#### SOUTHERN METHODIST UNIVERSITY

BROOKS, JAMES E; GRADUATE TRAINEESHIPS (2008501); 18 MONTHS \$35,250

#### TBXAS A & M UNIVERSITY

KUNZE, GEORGE W; GRADUATE TRAINEESHIPS (Z001734, 004); \$5,606 KUNZE, GEORGE W; GRADUATE TRAINEESHIPS (Z004504); 18 MONTHS 58A150

### TRXAS CHRISTIAN UNIVERSITY

REUTER, FRANK T; GRADUATE TRAINEESHIPS (Z001735 001); \$400 REUTER, FRANK T; GRADUATE TRAINEESHIPS (Z002503); 18 MONTHS \$5.875

#### TEXAS TECH UNIVERSITY

AINSWORTH, LEN; GRADUATE TRAINEESHIPS (Z009504); 18 MONTHS \$17,625

### TBXAS WOMANOS UNIVERSITY

SMITH, A A; GRADUATE TRAINEESHIPS (2001737 001); \$227 SMITH, A A; GRADUATE TRAINEESHIPS (2001505); 18 MONTHS \$5,876

## UNIV OF TEXAS AT ARLINGTON

BAKER, W A; GRADUATE TRAINEESHIPS (Z002507); 18 MONTHS \$5,875

#### UNIV OF TEXAS AT AUSTIN

ELLISON, FRED P; GRADUATE TRAINEESHIPS (2001740 002); \$9,612 ELLISON, FRED; GRADUATE TRAINEESHIPS (2002508); 18 MONTHS \$152,750

### UNIVERSITY OF HOUSTON

BUNN, RONALD F; GRADUATE TRAINEESHIPS (Z001718 002); \$4,836 JAMESON, DAVID L; GRADUATE TRAINEESHIPS (Z001506); 18 MONTHS 33,250

### UTAH

#### BRIGHAM YOUNG UNIVERSITY

RIDDLE, CHAUNCEY C; GRADUATE TRAINEESHIPS (Z001741 001); 19847

RIDDLE, CHAUNCEY C; GRADUATE TRAINEESHIPS (Z002508); 18 MONTHS \$17,525

### UNIVERSITY OF UTAH

MCMURRIN, STERLING M; GRADUATE TRAINEESHIPS (Z001742 002); \$13,398

MCMURRIN, STERLING M; GRADUATE TRAINEESHIPS (Z002510); 18 MONTHS \$70,500

#### UTAH STATE UNIVERSITY

GARDNER, ELDON J; GRADUATE TRAINEESHIPS (Z00174º 009); \$14,086 GARDNER, ELDON J; GRADUATE TRAINEESHIPS (Z008511); 18 MONTHS \$35,250

### VERMONT

### UNIVERSITY OF VERMONT

MACMILLAN, WILLIAM H; GRADUATE TRAINEESHIPS (Z001744 001); \$963

JOHNSTONE, DONALD B; GRADUATE TRAINEESHIPS (Z006512); 18 WONTHS \$17,625

### VIRGINIA

NONE; OTHER PROGRAM AWARDS (GLAWDS); \$1,279

#### COLLEGE OF WILLIAM AND MARY

SELBY, JOHN E; GRADUATE TRAINEESHIPS (2004519); 18 MONTHS 811.628

### UNIVERSITY OF VIRGINIA

WHITEHEAD, W D; GRADUATE TRAINEESHIPS (2008)18): 18 MONTHS \$58,760

#### VIRGINIA POLYTECHNIC INSTITUTE

BULL, FRED W; GRADUATE TRAINEESHIPS (2004514); 18 MONTHS \$58,760

# VIRGINIA COMMONWEALTH UNIVERSITY-HEALTH SCIENCES DIVISION

WATTS, DANIEL T; GRADUATE TRAINEESHIPS (2004514); 18 MONTHS \$5,815

#### WASHINGTON

#### UNIVERSITY OF WASHINGTON

MCCARTHY, JOSEPH L; GRADUATE TRAINEESHIPS (Z001749 008); \$14,711

MCCARTHY, JOSEPH L; GRADUATE TRAINEESHIPS (Z008517); 18 MONTHS \$164,500

### WASHINGTON STATE UNIVERSITY

NYMAN, C J; GRADUATE TRAINEESHIPS (Z004518); 18 MONTHS \$47,000

#### WEST VIRGINIA

#### **WEST VIRGINIA UNIVERSITY**

LUDLUM, JOHN C; GRADUATE TRAINEESHIPS (2008518); 18 KONTHS \$35,250

#### WISCONSIN

### INSTITUTE OF PAPER CHEMISTRY

MILLER, ARILD J; GRADUATE TRAINEESHIPS (2001580); 18 MONTHS \$5,875

### MARQUETTE UNIVERSITY

QUADE, QUENTIN L; GRADUATE TRAINEESHIPS (2001758 001); \$2,181 QUADE, QUENTIN L; GRADUATE TRAINEESHIPS (2001811); 18 MONTHS \$17,825

### UNIVERSITY OF WISCONSIN, MADISON

BOCK, ROBERT M; GRADUATE TRAINEESHIPS (200134 002); \$15,426 BOCK, ROBERT M; GRADUATE TRAINEESHIPS (2001342); 18 MONTHS \$211,500

#### UNIVERSITY OF WISCONSIN, MILWAUKEE

FENSKE, RUSSELL W; GRADUATE TRAINEESHIPS (2001755 001); \$5,358 FENSKE, RUSSELL W; GRADUATE TRAINEESHIPS (2001581); 18 MONTHS \$29,375

### WYOMING

### UNIVERSITY OF WYOMING

MCCOLLOCH, R J; GRADUATE TRAINEESHIPS (2001756 001); \$1,304 BRUCE, ROBERT H; GRADUATE TRAINEESHIPS ( 2001756 001); 18 MONTHS \$17,625

# INSTRUCTIONAL PERSONNEL DEVELOPMENT

### PRE-COLLEGE LEVEL

### ALARAMA

## AUBURN UNIVERSITY

BUTZ, R K; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOSSUS); 10 MONTHS \$58,764

### MOBILE COLLEGE

SMITH, GEORGE A; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007890); 19 MONTHS 88,126

#### TUSKEGEE INSTITUTE

KOONS, LAWRENCE F; SUMMER INSTITUTE IN CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (WOO6891); 10 MONTHS \$38,220

### UNIVERSITY OF ALABAMA IN BIRMINGHAM

VAUGHAN, L O; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007361); 19 MONTHS \$15,125

SETTINE, ROBERT L; IN-SERVICE INSTITUTE IN CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (W007477); 10 MONTHS \$12,939

### UNIVERSITY OF SOUTH ALABAMA

BJORK, DAVID M: IN-SERVICE INSTITUTE IN MACOS SOCIAL SCIENCES CURRICULUM DEVELOPMENT FOR SECONDARY SCHOOL TEACHERS (W007474): 19 MONTHS \$12,115



#### ALASKA

#### UNIVERSITY OF ALASKA

STICKNEY, ROLAND F, IN-SERVICE INSTITUTE IN ENVIRONMENTAL SCIENCE CURRICULUM STUDY FOR SECONDARY SCHOOL TEACHERS (W007413); 19 MONTHS \$6,410

### ARIZONA

#### ABIZONA STATE UNIVERSITY

RAWLS, WILLIAM S; IN-SERVICE INSTITUTE IN MECHANICS FOR SECONDARY SCHOOL TEACHERS (Woo7484); 19 MONTHS \$10,452

#### NORTHERN ARIZONA UNIVERSITY

BEUS. STANLEY S: SUMMER INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOSPEE); 10 MONTHS \$47.518

#### UNIVERSITY OF ARIZONA

STEINBRENNER, ARTHUR H; SUMMER INSTITUTE IN MATHE-MATICS FOR SECONDARY SCHOOL TEACHERS (WOGGADS): 10 MONTHS \$74,168

SEELEY, MILLARD G; SUMMER INSTITUTE IN MULTIPLE FIELDS FOR SECONDARY SCHOOL TEACHERS (WOX 919); 10 MONTHS \$81,125 HCSHAW, ROBERT W; IN-SERVICE INSTITUTE IN SCIENCE FOR SECONDARY SCHOOL TEACHERS (W007336); 19 MONTHS \$20,847

STEINBRENNER, ARTHUR H; IN-SERVICE INSTITUTE IN COMPUTER MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007J51); 19 LONTHS \$7.921

#### ARKANSAS

#### UNIVERSITY OF ARKANSAS

ORTON, WILLIAM R: COMPREHENSIVE PROGRAM FOR SECONDARY SCHOOL TEACHERS OF MATHEMATICS (W007314); 23 MONTHS \$200,119 ORTON, WILLIAM R; COMPREHENSIVE PROGRAM FOR SECONDARY SCHOOL TEACHERS OF MATHEMATICS (WOOTSIA 001): 12 MONTHS \$228,457

### UNIVERSITY OF ARKANSAS-UNIVERSITY OF ARKANSAS AT

#### MONTICELLO

GUENTER. JOE M; SUMMER INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (W0069J4): 10 MONTHS \$41,591

#### CALIFORNIA

#### CALIFORNIA STATE COLLEGE AT SAN BERNARDINO

STANTON, GORDON E; INSERVICE INSTITUTE IN SOCIOLOGY AND SOCIAL STUDIES FOR SECONDARY SCHOOL TEACHERS (W007396); 19 118.88 SHTROM

#### CALIFORNIA STATE COLLEGE AT SONOMA

BRUMBAUGH, JOE H; SUMMER INSTITUTE IN BIOLOGY FOR SECON-DARY SCHOOL TEACHERS (WOOS874); 10 MONTHS \$59,038

DUNCAN, DONALD G: IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007395); 19 MONTHS \$8,557

### CALIFORNIA STATE UNIVERSITY, FRESNO

LABARRE JR. ANTHONY E; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOS951); 10 MONTHS \$46,840

LYLES JR. EAMUEL P. INSERVICE INSTITUTE IN PHYSICAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (W001455): 19 MONTHS \$8,090

### CALIFORNIA STATE UNIVERSITY, FULLERTON

TURNER, GEORGE C: 1971-72 ACADEMIC YEAR INSTITUTE IN BIOLOGY FOR SECONIARY SCHOOL TEACHERS AND TEACHER-INTERNS (W'005851 002); \$21,500

TURNER, GEORGE C; ACADEMIC YEAR INSTITUTE IN BIOLOGY FOR SECONDARY SCHOOL TEACHERS AND TEACHER-INTERNS (W00706J); 24

MONTHS \$50.785 TERNER, GEORGE C: IN SERVICE INSTITUTE IN HUMAN ECOLOGY FOR SEWONDARY SCHOOL TEACHERS (WOOTSLED: 19 MONTHS \$10.467

TURNIAR, GEORGE C: COMPREHENSIVE URBAN SCIENCE INTERN TEACHING PROJECT (W007625); 29 MONTHS \$421,140

### CALIFORNIA STATE UNIVERSITY, SACRAMENTO

COSTA, ARTHUR L; IN-SERVICE INSTITUTE IN SOCIAL SCIENCES FOR SECONDARY SCHOOL TEACHERS (Woo?500): 8 MONTHS \$17,071

### CALIFORNIA STATE UNIVERSITY, SAN DIEGO

SMITH JR, LOUIS E; 1971 SUMMER INSTITUTE IN GENERAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOGH) 001); \$1,407
BECKER, GERALD A; SUMMER INSTITUTE IN MATHEMATICS FOR

SECONDARY SCHOOL TEACHERS (WOODATS); 10 MONTHS \$88,256
DESSEL, NORMAN F; SUMMER INSTITUTE IN PROJECT PHYSICS FOR SECONDARY SCHOOL TEACHERS (WOO6881); 10 MONTHS \$59,072

SMITH JR, LOUIS E; SUMMER INSTITUTE IN GENERAL SCIENCE FOR

SECONDARY SCHOOL TEACHERS (WOO6995): 10 MONTHS \$67,967 BECKER, GERALD A; ACADEMIC YEAR INSTITUTE IN MATHE-MATICS FOR EXPERIENCED AND INTERN SECONDARY SCHOOL

TEACHERS (W007060); 24 MONTHS \$55,976 WALLACE, WILLIAM J; IN-SERVICE INSTITUTE IN OCEANOGRAPHY

FOR SECONDARY SCHOOL TEACHERS (WOOTJSO): 19 MONTHS \$1.783

#### CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO

SULLIVAN, RAYMOND; IN-SERVICE INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (W001413); 19 MONTHS \$14,328

#### California State University. San Jose

PRUITT, ROBERT; COMPREHENSIVE PROGRAM FOR SECONDARY SCHOOL TEACHERS OF MATHEMATICS (WOOGJET OOT); 12 MONTHS \$279,837

MINGS, TURLEY R; SUMMER INSTITUTE IN ECONOMICS FOR SECON. DARY SCHOOL TEACHERS (WOOTOIG), 10 MONTHS \$52,835

CRAIG, JAMES M; IN-SERVICE INSTITUTE IN GENERAL MICROBIOLO-GY FOR SECONDARY SCHOOL TEACHERS (WOOTHIO); 19 MONTHS \$12,663

CRAIG, JAMES M; IN-SERVICE INSTITUTE IN GENERAL HICROBIOLO-GY FOR SECONDARY SCHOOL TEACHERS (Woo7410 001); \$3,731

BEARD, JEAN; IN-SERVICE INSTITUTE IN ISCS STRATEGY AND EX. PERIENCES FOR SECONDARY SCHOOL TEACHERS (V'007488); 19 MONTHS \$12,586

BEARD, JEAN; IN-SERVICE INSTITUTE IN ISCS STRATEGY AND EX-PERIENCES FOR SECONDARY SCHOOL TEACHERS (W007488 001); \$2,052

#### STANFORD UNIVERSITY

BACON, HAROLD M; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOO6890); 10 MONTHS \$69,374

#### UNIVERSITY OF CALIFORNIA. RERKELRY

WHINNERY, JOHN R: IN-SERVICE INSTITUTE IN ENGINEERING CON-CEPTS CURRICULUM PROJECT FOR SECONDARY SCHOOL TEACHERS (W008801); 13 MONTHS \$16,952

KNIGHT, C ARTHUR; SUMMER INSTITUTE IN MOLECULAR BIOLOGY FOR SECONDARY SCHOOL TEACHERS (WOO6833); 10 MONTHS \$64,070

CRAWFORD, FRANK; SUMMER INSTITUTE IN TEACHER INITIATED PROJECTS FOR SECONDARY SCHOOL TEACHERS (WOOGPIT); 8 MONTHS \$67,487

FRY, WAYNE L; SUMMER AND IN-SERVICE INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOSPILL); 20 MONTHS \$77,282

DAHLSTEN, DONALD L; SHORT COURSE ON ENVIRONMENTAL STU-DIES FOR SECONDARY SCHOOL TEACHERS (WOO7297); 19 MONTHS \$12,529

MILLER, JOHN D; IN-SERVICE INSTITUTE IN SCIENCE AND MATHE-MATICS INSTRUCTION FOR SECONDARY SCHOOL TEACHERS (WOOTJRS); 19 MONTHS \$16.119

STONE, EDWARD C; IN-SERVICE INSTITUTE IN BIOLOGY FOR SECON-DARY SCHOOL TEACHERS (WOOTJ86): 19 MONTHS \$1.097

### UNIVERSITY OF CALIFORNIA, LOS ANGELES

BURKHARD, MERTON; SUMMER INSTITUTE IN PHYSICS FOR SECON-DARY SCHOOL TEACHERS (WOO6814); 17 MONTHS \$7,022

#### UNIVERSITY OF CALIFORNIA, SANTA BARBARA

MEYER. WILLIAM H: SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W006896); 19 MONTHS \$90,336

#### UNIVERSITY OF PEDLANDS

TROLAN, J KENNETH; IN-SERVICE INSTITUTE IN PHYSICS FOR SECONDARY SCHOOL TEACHERS (WOOTAST); 19 MONTHS \$10,628

### UNIVERSITY OF SAN FRANCISCO

FARRELL, EDWARD J; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007225); 10 MONTHS \$37,979

### UNIVERSITY OF SANTA CLARA

KLOSINSKI, L F; SUMMER AND IN-SERVICE INSTITUTE IN MATHE-MATICS FOR SECONDARY SCHOOL TEACHERS (WOOGS 44); 20 MONTHS \$72,451

DEMARTINI, JOSEPH; SUMMER INSTITUTE IN SOCIOLOGY FOR SECONDARY SCHOOL TEACHERS (W007020); 10 MONTHS \$51,630

HAMLETT, BRUCE D. SHORT COURSE ON SIMULATION TECHNIQUES FOR SECONDARY SCHOOL TEACHERS (Woot309); 19 MON'THS \$12,831

### UNIVERSITY OF SOUTHERN CALIFORNIA

WHITE, PAUL A: SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W006949); 10 MONTHS \$52,417 WHITE, PAUL A: IN-SERVICE INSTITUTE IN MATHEMATICS FOR

SECONDARY SCHOOL TEACHERS (W007433); 19 MONTHS \$24,117

### COLORADO

### COLORADO COLLEGE

KESTER, KEITH B; IN-SERVICE INSTITUTE IN CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (W007447); 19 MONTHS \$5,818

### **COLORADO SCHOOL OF MINES**

BURNETT, JERROLD J; IN-SERVICE INSTITUTE IN GENERAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (W001342); 19 MONTHS \$22,459

## COLORADO STATE UNIVERSITY

PAINTER, RICHARD J; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (Woods43); 10 MONTHS \$67,393

BRITTON, CHARLES C; SUMMER INSTITUTE IN TECHNOLOGY AND SOCIETY FOR SECONDARY SCHOOL TEACHERS (W006916); 10 MONTHS \$49,185



### FORT LEWIS COLLEGE

GIBBS, RICHARD A; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOTHE); 19 MONTHS 86,838

#### SOCIAL SCIENCE EDUCATION CONSORTIUM INC

DAVIS, JAMES E: CONFERENCE IN SOCIAL SCIENCE EDUCATION FOR STATE SOCIAL STUDIES SPECIALISTS (W007450); 15 MONTHS \$19,186

### UNIVERSITY OF COLORADO

MALER, G J; SUMMER INSTITUTE IN ENGINEERING SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOODING): 10 MONTHS 488.254

HAAS, JOHN D; ACADEMIC YEAR INSTITUTE IN SOCIAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOO7047); 24 MONTHS \$94,514

MAYER, WILLIAM Y; SUMMER INSTITUTE IN BIOLOGY FOR SECON-

DARY SCHOOL TEACHERS (WOOTELS): 10 MONTHS \$77,868
WAILES, JAMES B; SHORT COURSE ON NATIONAL CURRICULAR STUDIES FOR SCIENCE SUPERVISORS AND COLLEGE PERSONNEL
(WOOTED): 10 MONTHS \$19,060

HAAL, JOHN D; IN-SERVICE INSTITUTE IN POLITICAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOTHT); 19 MONTHS \$10,250

### UNIVERSITY OF NORTHERN COLORADO

DIETZ, RICHARD D; IN-SERVICE INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOT UP); 19 MONTHS \$18,800

DIETZ, RICHARD D; IN-SERVICE INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (W007197 001); \$3,110

## UNIVERSITY OF COLORADO-COLORADO SPRINGS CENTER

SHERMAN, JACK; IN-SERVICE INSTITUTE IN MATHEMATICS (COLAMDA) FOR SECONDARY SCHOOL TEACHERS (W007389); 19 MONTHS \$8,658

SHERMAN, JACK; IN-SERVICE INSTITUTE IN 'THE MAN-MADE WORLD' FOR SECONDARY SCHOOL TEACHERS (W007438); 19 MONTHS 812.099

### UNIVERSITY OF COLORADO-DENVER CENTER

ALLEN, FREDERICK S; IN-SERVICE INSTITUTE IN STRUCTURE OF THE SOCIAL SCIENCES FOR SECONDARY SCHOOL TEACHERS (W007383); 19 MONTHS \$21,696

#### CONNECTICUT

#### PAIRFIELD UNIVERSITY

BOLGER, ROBERT E; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007334); 19 MONTHS \$10.84

#### SOUTHERN CONNECTICUT STATE COLLEGE

SCHRADER, DOROTHY V; ACADEMIC YEAR INSTITUTE IN MATHE-MATICS FOR INTERN TEACHERS AND SECONDARY SECONDARY SCHOOL TEACHERS (W007044); 24 MONTHS \$23,078

#### ST JOSEPH COLLEGE

MARKHAM, M CLARE; SUMMER AND IN-SERVICS INSTITUTE IN EN-VIRONMENTAL STUDIES FOR SECONDARY SCHOOL TEACHERS (W007221); 20 MONTHS \$16,896

#### UNIVERSITY OF CONNECTICUT

WOLFE, MARTIN S; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOO7005); 10 MONTHS \$47,851

#### WESLEYAN UNIVERSITY

CRONIN, JAMES E; SUMMER INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOGST); 10 MONTHS \$19,295

CRONIN, JAMES E; SUMMER INSTITUTE IN MULTIPLE FIELDS FOR SECONDARY SCHOOL TEACHERS (Woodstr); 11 MONTHS \$45,143

#### DELAWARE

### UNIVERSITY OF DELAWARE

PURNELL, CHARLOTTE H; THE DEL MOD SYSTEM PROJECT - A SYSTEMS APPROACH TO SCIENCE EDUCATION IN DELAWARE (WOOGTOS 001); \$39,310

PURNELL, CHARLOTTE H; THE DEL MOD SYSTEM PROJECT-A SYSTEMS APPROACH TO SCIENCE EDUCATION IN DELAWARE (WOOSIGS 001); 12 MONTHS \$591,162

SLOYER, CLIFFORD W; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007353); 19 MONTHS \$7,343

### DISTRICT OF COLUMBIA

### NONE; OTHER PROGRAM AWARDS (I LAWDS); \$16,545

#### AMBRICAN UNIVERSITY

MOTZ, ANNABELLE; 1971-72 IN-SERVICE INSTITUTE IN SOCIOLOGY FOR SECONDARY SCHOOL TEACHERS (W005876 001); 15 MONTHS \$3,925 SCHUBERT, LEO; SUMMER INSTITUTE IN SPECIAL TOPICS IN

CHEMISTRY AND PHYSICS FOR SECONDARY SCHOOL TEACHERS (WOO4913); 10 MONTHS \$66,543

SCHUBERT, LEO; INSERVICE INSTITUTE IN SCIENCE AND MATHE-MATICS FOR SECONDARY SCHOOL TEACHERS (W001316); 19 MONTHS 822 730

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SCHUBERT, LEO; 1913-71 IN-SERVICE INSTITUTE IN SCIENCE AND MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007637); 25 MONTHS \$23,831

### CATHOLIC UNIVERSITY OF AMERICA

MOLLER, RAYMOND W; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOODSO); 6 MONTHS \$38,080

#### GEORGE WASHINGTON UNIVERSITY

BARI, RUTH A; INSERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOTSEL); 19 MONTHS \$9,900

#### HOWARD UNIVERSITY

TAYLOR, MARIE C; SUMMER INSTITUTE IN PIOLOGY FOR SECONDA-RY SCHOOL TEACHERS (WOOSSI); 10 MONTHS \$39,201

#### NATIONAL SCIENCE TEACHERS ASSOCIATION

MERRILL, RICHARD J; IN-SERVICE EDUCATION OF TEACHERS OF SCIENCE THROUGH SPECIAL PROGRAM COMPONENTS OF REGIONAL CONFERENCES OF NSTA (W00807); 12 MONTHS \$18,000

MERRILL, RICHARD J; INSERVICE ACTIVITIES IN SCIENCE AND TEACHING OF SCIENCE (W00607 001): 12 MONTHS \$20,008

KIZER, FRANKLIN D; SEVEN REGIONAL CONFERENCES ON SCIENCE EDUCATION IN THE ELEMENTARY AND SECONDARY SCHOOLS OF THE NATION (WOOSEOF); 12 MONTHS \$46,887

#### FLORIDA

#### FLORIDA STATE UNIVERSITY

WESTMEYER, PAUL H; 1970 SUMMER INSTITUTE IN NEW CURRICU-LUM DEVELOPMENTS FOR SCIENCE SUPERVISORS (WOOL878 OO!); \$1,050 WESTMEYER, PAUL H; SUMMER INSTITUTE IN NEW CURRICULUM DEVELOPMENTS FOR SCIENCE SUPERVISORS (WOOS918); 10 MONTHS \$41,228

WESTMEYER, PAUL; SUMMER INSTITUTE ON THE INTERMEDIATE SCIENCE CURRICULUM STUDY MATERIALS FOR SECONDARY SCHOOL TEACHERS (WOODSS); 10 MONTHS \$40,730

WESTMEYER, PAUL; SUMMER INSTITUTE IN TEACHER INITIATED PROGRAMS FOR SECONDARY SCHOOL TEACHERS (WOODSE4); 10 MONTHS M:148

WILLS, HERBERT; ACADEMIC YEAR INSTITUTS IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOO7054); 24 MONTHS \$135,089

WESTMEYER, PAUL; IN-SERVICE INSTITUTE IN BSCS-SPECIAL MATERIALS FOR SECONDARY SCHOOL TEACHERS (W007501); 19 MONTHS \$15,594

WESTMEYER, PAUL; IN-SERVICE INSTITUTE IN THE INTER-MEDIATE SCIENCE CURRICULUM STUDY MATERIALS FOR SECONDA-RY SCHOOL TEACHERS (WOOTERS); 18 MONTHS \$15,368

### FLORIDA TECHNOLOGICAL UNIVERSITY

BOLTE, JOHN R; 1971 SUMMER INSTITUTE IN PHYSICS FOR SECONDARY SCHOOL TEACHERS (WOOLGO OOL); \$178

### UNIVERSITY OF FLORIDA

NELSON, CHARLES W; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOODDS); 10 MONTHS \$59,902

RAPPENECKER, CASPAR; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WODISE): 19 MONTHS \$28,300

RAPPENECKER, CASPAR; IN-SERVICE INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (W00144); 19 MONTHS \$50,258

RAPPENECKER, CASPAR; IN-SERVICE INSTITUTE IN INTRODUCTO-RY PHYSICAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (W007344); 19 MONTHS \$16,990

#### GEORGIA

#### ATLANTA UNIVERSITY

FREDERICK, LAFAYETTE; ACADEMIC YEAR INSTITUTE IN BIOLOGY AND CHEMISTRY FOR SECONDARY : On YOU TEACHERS (W007053); 24 MONTHS \$128,828

### EMORY UNIVERSITY

DOWNES, JOHN P; SUMMER INSTITUTE IN MATESMATICS FOR SECONDARY SCHOOL TEACHERS (WOOGSS); 10 MONTHS \$49,946

LESTER, CHARLES T; IN-SERVICE INSTITUTE FOR SECONDARY SCHOOL TEACHERS (W007316); 19 MONTHS \$12,906

#### NORTH GEORGIA COLLEGE

ROUGHEAD JR, WILLIAM G; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007708); 10 MONTHS \$50,166

#### SHORTER COLLEGE

GREEAR, PHILIP F-C; SHORT COURSE ON NATURAL RESOURCE USE EDUCATION FOR SECONDARY SCHOOL TEACHERS (W007303); 19 MONTHS \$4,605

### UNIVERSITY OF GEORGIA

WAGGONER, W H; SUMMER INSTITUTE IN MULTIPLE FIELDS FOR SECONDARY SCHOOL TEACHERS (WOODST): 10 MONTHS \$30,930

KELLY, PAUL EDWARD; SUMMER INSTITUTE IN SOCIOLOGY FOR SECONDARY SCHOOL TEACHERS (WOOTORT); 10 MONTHS \$34,749



KOELSCHE, CHARLES L; IN-SERVICE INSTITUTE IN BIOLOGICAL, PHYSICAL AND EARTH SCIENCES FOR SECONDARY SCHOOL TEACHERS (Wootsel): 19 MONTHS \$31,978

### VALDOSTA STATE COLLEGE

CONNELL, CLYDE E; SHORT COURSE ON NATURAL RESOURCE EDU-CATION FOR SECONDARY SCHOOL TEACHERS (WOOTHIN): 10 MONTHS \$4,656

#### HAWAII

#### UNIVERSITY OF HAWAII

WONG. RUTH E M; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007330); 19 MONTHS \$26,954 NOSE, KATASHI; IN-SERVICE INSTITUTE IN ELECTRONICS FOR SECONDARY SCHOOL TEACHERS (WOOTLIS): 19 MONTHS \$10,440

#### IDAHO

#### COLLEGE OF IDAHO

HENRY, BOYD, IN-SERVICE INSTITUTE IN COMPUTER MATHE-MATICS FOR SECONDARY SCHOOL TEACHERS (WOOTHJ); 19 MONTHS \$9.675

#### UNIVERSITY OF IDAHO

TYLUTKI, EDMUND E; SUMMER INSTITUTE IN MULTIPLE FIELDS FOR SECONDARY SCHOOL TEACHERS (WOOG894); 10 MONTHS \$83,626

#### **ILLINOIS**

### DEPAUL UNIVERSITY

SEMRAD, JOSEPH E: IN-SERVICE INSTITUTE IN BIOLOGY FOR SECONDARY SCHOOL TEACHERS (WOOTJIS); 19 MONTHS \$12,625

### ILLINOIS INSTITUTE OF TECHNOLOGY

WILCOX, L R; ACADEMIC YEAR INSTITUTE IN COMPUTER SCIENCE FOR SECONDARY SCHOOL TEACHERS (W007036); 24 MONTHS \$126,866 ZWICKER, EARL; SUMMER AND IN-SERVICE INSTITUTE IN PHYSICS FOR SECONDARY SCHOOL TEACHERS (WOOTZIP), 20 MONTHS \$38,074

REINGOLD, HAIM; IN-SERVICE INSTITUTE IN MATHEMATICS AND COMPUTERS FOR SECONDARY SCHOOL TEACHERS (WOOTJON); 19 MONTHS \$40,951

#### KNOX COLLEGE

PRIESTLEY, HERBERT; SUMMER INSTITUTE IN SCIENCE AND SOCIETY FOR SECONDARY SCHOOL TEACHERS (W006864); 10 MONTHS \$44,975

PRIESTLEY, HERBERT; SHORT COURSE ON SCIENCE AND SOCIETY FOR SECONDARY SCHOOL TEACHERS (WOOTER4); 10 MONTHS \$8,340

HARRIS, LELAND, IN-SERVICE INSTITUTE IN CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (WOO7448): 19 MONTHS \$7,961

### NORTHEASTERN ILLINOIS STATE COLLEGE

QUTUB, MUSA Y; IN SERVICE INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOJSOJ): 19 MONTHS \$10,960

### NORTHERN ILLINOIS UNIVERSITY

BEHR, MERLYN J. SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOTZZI): 10 MONTHS 166,265

#### NORTHWESTERN UNIVERSITY

HERRICK, THERAL T; SHORT COURSE ON ECONOMICS FOR SECON. DARY SCHOOL TEACHERS AND ADMINISTRATORS (W007312): 10 MONTHS \$24,679

### ROOSEVELT UNIVERSITY

HARRIS, ARTHUR; SUMMER INSTITUTE IN SCIENCE FOR SECONDA-RY SCHOOL TEACHERS (W006900): 10 MONTHS \$34,385

#### SOUTHERN ILLINOIS UNIVERSITY - CARBONDALE

MCDANIEL, WILBUR C: SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOO6860); 10 MONTHS \$15,649

## UNIVERSITY OF ILLINOIS AT CHICAGO CIRCLE

SETTON, HENRY A; IN-SERVICE INSTITUTE IN 'THE MAN-MADE WORLD' (ECCP) FOR SECUNDARY SCHOOL TEACHERS (WOOTLY9); 10 MONTHS \$10,070

HART, ALICE: IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOO7478); 19 MONTHS \$22,000

### UNIVERSITY OF ILLINOIS AT URBANA

ZARING, WILSON M; ACADEMIC YEAR INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007043); 24 MONTHS \$171,528

ZWOYER, RUSSELL E; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007218); 10 MONTHS \$100,000

PADEN, DONALD W. SUMMER INSTITUTE IN ECONOMICS FOR SECONDARY SCHOOL TEACHERS (WOOTZJJ); 10 MONTHS \$22,841 PADEN, DONALD W: 1973 SUMMER INSTITUTE IN ECONOMICS FOR

SECONDARY SCHOOL TEACHERS (WC076JO); 14 MONTHS \$18,764

### UNIVERSITY OF LOUISVILLE

ZARING, WILSON: IN-SERVICE INSTITUTE IN COMPUTER SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOGAGI); 13 MONTHS \$16,179

#### INDIANA

#### BALL STATE UNIVERSITY

MERTENS, THOMAS R: SUMMER INSTITUTE IN BIOLOGY FOR SECON. DARY SCHOOL TEACHERS (WOOSERS); 10 MONTHS \$62.198

MCCORNICK, ROY L; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOSDIO): 10 MONTHS \$48,068

AVILA, RAMON L: IN-SERVICE INSTITUTE IN PROBLEMS IN THE TEACHING OF JUNIOR HIGH MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007367); 19 MONTHS \$6,603

#### DEPAUW UNIVERSITY

GASS, CLINTON B; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007400): 10 MONTHS \$41 210

#### INDIANA STATE UNIVERSITY

POORMAN, LAWRENCE E: INSERVICE INSTITUTE IN PHYSICS AND BIOPHYSICS FOR SECONDARY SCHOOL TEACHERS (WOOTHER): 19 MONTHS \$3,517

#### INDIANA UNIVERSITY, BLOOMINGTON

WILCOX, KARIE S; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOGS 40); 10 MONTHS \$65,883

DROSTE, JOHN B; SUMMER INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOSSES); 10 MONTHS \$65,308

MCCLUNG, L S; SUMMER INSTITUTE IN MICROBIOLOGY FOR SECON-DARY SCHOOL TEACHERS (WOOd978): 10 MONTHS \$35,926

#### PURDUE UNIVERSITY

OLSON. J BENNET; SUMMER INSTITUTE IN BIOLOGY FOR SECONDA. RY SCHOOL TEACHERS (WOOGDED): 10 MONTHS \$68.618

NEIE, VAN E; SUMMER INSTITUTE IN PHYSICS FOR SECONDARY SCHOOL TEACHERS (W006973); 10 MONTHS \$116,177

HERRON, J D; SUMMER INSTITUTE IN CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (WOOS\$74), 10 MONTHS \$71.818

WHEATLEY, GRAYSON H; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W006981); 10 MONTHS \$60,400

BECHTEL, ROBERT D: SUMMER AND IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007196); 20 MONTHS \$136,877

### UNIVERSITY OF EVANSVILLE

COLEMAN, RALPH H; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOTJBB); 19 MONTHS \$6,441

### UNIVERSITY OF NOTRE DAME

MURPHY, MICHAEL J; 1971-74 IN-SERVICE INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (W005759 001); \$4,079

GOETZ, ABRAHAM; COMPREHENSIVE PROJECT OF SUPPLEMENTA. RY EDUCATION FOR SECONDARY SCHOOL TEACHERS OF MATHE. MATICS (W006369 001); 12 MONTHS \$318,120

ANTHONY, ROBERT L; SUMMER INSTITUTE IN PHYSICS FOR SECON-DARY SCHOOL TEACHERS (WOOSEST); 10 MONTHS \$48,492

MURPHY. MICHAEL J. SUMMER INSTITUTE IN BARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOG897); 10 MONTHS \$115,073

HOFMAN, EMIL T; SUMMER INSTITUTE IN CHEMISTRY FOR SECON-DARY SCHOOL TEACHERS (WOO6946); 10 MONTHS \$75,010 MURPHY, MICHAEL J: IN-SERVICE INSTITUTE IN EARTH SCIENCE

FOR SECONDARY SCHOOL TEACHERS (WOOTLESS); 19 MONTHS \$14,215

### **IOWA**

## CLARKE COLLEGE

KELLER, SR MARY K; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOO6921); 10 MONTHS \$32,721

ROGERS, RODNEY A: SUMMER INSTITUTE IN BIOLOGY FOR SECON-DARY SCHOOL TEACHERS (WOOSSID), 10 MONTHS \$65,695 WOODWORTH, WAYNE L; SUMMER INSTITUTE IN MATHEMATICS

FOR SECONDARY SCHOOL TEACHERS (WOOS918), 11 MONTHS \$58,649

### IOWA STATE UNIVERSITY OF SCIENCE & TECHNOLOGY

HUSSEY, KEITH M; SUMMER INSTITUTE EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOO6956); 10 MONTHS \$39,228

#### UNIVERSITY OF IOWA

YAGER, ROBERT E; SUMMER INSTITUTE IN INTERDISCIPLINARY ENVIRONMENTAL STUDIES FOR SECONDARY SCHOOL TEACHERS (W006989); 8 MONTHS \$49,878

YAGER, ROBERT E; SUMMER INSTITUTE IN MOLECULAR BIOLOGY FOR SECONDARY SCHOOL TEACHERS (W006990); 20 MONTHS \$62,190

YAGER, ROBERT E; ACADEMIC YEAR INSTITUTE IN MATHEMATICS AND SCIENCE FOR SUPERVISOR INTERNS (W007042); 24 MONTHS \$96,563 WILMETH, J RICHARD; SUMMER INSTITUTE IN SOCIOLOGY FOR SECONDARY SCHOOL TEACHERS (W007201): 10 MONTHS \$47,366

KEPNER, HENRY S; SHORT COURSE ON COMPUTER SCIENCE FOR SECONDARY SCHOOL TEACHERS (W007308), 10 MONTHS \$18,800

YAGER, ROBERT E: IN-SERVICE INSTITUTE IN UNIFIED SCIENCE CONCEPTS FOR SECONDARY SCHOOL TEACHERS (W007471); 19 MONTHS \$15,049



#### UNIVERSITY OF NORTHERN IOWA

ALBERTS, LYLE K: IN-SERVICE INSTITUTE IN SOCIAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOT 160); 19 MONTHS \$13,966

HANSON, ROBERT W; IN-SERVICE INSTITUTE IN ENVIRONMENTAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOTLIS); 19 MONTHS

#### KANSAS

### KANSAS STATE COLLEGE OF PITTSBURG

THOMAS, HAROLD L; SUMMER INSTITUTE IN MULTIPLE FIELDS FOR SECONDARY SCHOOL TEACHERS (WOOG928); 10 MONTHS \$52,258 THOMAS, HAROLD L; SUMMER INSTITUTE IN MULTIPLE FIELDS FOR SECONDARY SCHOOL TEACHERS (WOOTEN); 16 MONTHS \$33,701

### Kansas State Teachers College of Emporia

CRAM, & WINSTON: SUMMER INSTITUTE IN PHYSICAL SCIENCES FOR SECONDARY SCHOOL TEACHERS (WOOSSES); 10 MONTHS \$27,972 DURST, HAROLD, SUMMER INSTITUTE IN BIOLOGY FOR SECONDARY

SCHOOL TEACHERS (WOOS978); 10 MONTHS \$62,145 DURST, HAROLD; INSERVICE INSTITUTE IN ENVIRONMENTAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (W007411); 19 MONTHS

#### KANSAS STATE UNIVERSITY

CHELIKOWSKY, J R; SUMMER INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOSSET); 10 MONTHS \$37,572

MEYER, WALTER; SUMMER INSTITUTE IN POWER, SOCIETY AND THE ENVIRONMENT FOR SECONDARY SCHOOL TEACHERS (W0008937), 10 MONTHS \$48271

JAMES, ROBERT K; SUMMER INSTITUTE IN INTERMEDIATE SCIENCE CURRICULUM STUDY FOR SECONDARY SCHOOL TEACHERS (W'008880); 10 MONTHS \$53,143

DIXON, LYLE J; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOTJES); 19 MONTHS \$21,154

CHELIKOWSKY, J R; 1973 SUMMER INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOTEST), 15 MONTHS \$61,254

#### WICHITA STATE UNIVERSITY

TILFORD, MICHAEL PHILLIP; IN-SERVICE INSTITUTE IN THE MAN MADE WORLD (ECCP) FOR SECONDARY SCHOOL TEACHERS (WOOTHIT); 19 MONTHS \$16,628

#### KENTUCKY

#### GRORGETOWN COLLEGE

DOBYNS, ROY A; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOT366); 19 MONTHS \$6,170

### MURKAY STATE UNIVERSITY

BLACKBURN, WALTER E; SUMMER INSTITUTE IN GENERAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (W:206975); 10 MONTHS \$52,201

### UNIVERSITY OF KENTUCKY

CUNNINGHAM, JOEL; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOO7313); 9 MONTHS \$13,154

### UNIVERSITY OF LOUISVILLE

BORDOLO1, KIRON C; IN-SERVICE INSTITUTE IN SOLID-STATE ELECTRONIC DEVICES AND CIRCUITS BY THE KELLER METHOD FOR SECONDARY SCHOOL TEACHERS (WOO7491); 19 MONTHS \$10,620

#### WESTERN KENTUCKY UNIVERSITY

HOYT, ROBERT D; SUMMER INSTITUTE IN BIOLOGY FOR SECONDA-RY SCHOOL TEACHERS (WOO6926); 10 MONTHS \$29,087

#### LOUISIANA

### GRAMBLING COLLEGE

DOUGLAS, SAMUEL H; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOTOO4); 10 MONTHS 446,124 DOUGLAS, SAMUEL H; ACADEMIC YEAR INSTITUTE IN MATHE-

MATICS FOR SECONDARY SCHOOL TEACHERS (W007061); 24 MONTHS \$45,862

DOUGLAS, SAMUEL R; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOTSTO); 19 MONTHS \$11,100

### LOUISIANA STATE UNIVERSITY, BATON ROUGE

MITCHELL, BENJAMIN E; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOGSTI); 10 MONTHS \$42,498

BERTRAND, ALVIN L; SUMMER INSTITUTE IN SOCIOLOGY FOR SECONDARY SCHOOL TEACHERS (WOOG987); 10 MONTHS \$40,750

KARNES, HOUSTON T; ACADEMIC YEAR INSTITUTE IN MATHE-MATICS FOR SECONDARY SCHOOL TEACHERS (W007051); 24 MONTHS \$141.961

BENNETT, HARRY J; IN-SERVICE INSTITUTE IN MARINE SCIENCE AND COASTAL MARSH ECOLOGY FOR SECONDARY SCHOOL TEACHERS (W007392); 19 MONTHS \$10,945

### LOYOLA UNIVERSITY

BENEDETTO, F A; SUMMER INSTITUTE IN PHYSICS FOR SECONDA-RY SCHOOL TEACHERS (WOOTERS); 10 MONTHS \$45,450

TODD, LEWIS J; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (V'007343); 19 MONTHS \$26,104

#### MCNEESE STATE UNIVERSITY

SPENCER, S M; INSERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOT 401); 19 MONTHS \$4,468

### **SOUTHEASTERN LOUISIANA UNIVERSITY**

ANDREWS, NEWTON S; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOT446); 19 MONTHS \$8,788

RUFFIN, SPAULDING M; SUMMER INSTITUTE IN CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (W007e04); 10 MONTHS \$57,880

#### THEANE INIVERSITY

QUIGLEY, FRANK D; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOdsoo); 10 MONTHS \$56,023

#### **BOWDOIN COLLEGE**

GUSTAFSON, ALTON H; SUMMER INSTITUTE IN MARINE ECOLOGY FOR SECONDARY SCHOOL TEACHERS (W006876); 10 MONTHS \$46,677

WHEATLAND, DAVID A: SUMMER INSTITUTE IN CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (WOODSTT); 10 MONTHS \$40,877

CHITTIM, RICHARD L: SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOO6885): 10 MONTHS \$64,318

GROBE, CHARLES A JR; ACADEMIC YEAR INSTITUTE IN MATHE-MATICS FOR SECONDARY SCHOOL TEACHERS (W007058); 24 MONTHS

#### COLBY COLLEGE

REID, EVANS B; SUMMER INSTITUTE IN SCIENCE AND MATHE-MATICS FOR SECONDARY SCHOOL TEACHERS (WOOGOOS); 10 MONTHS \$74.169

### UNIVERSITY OF MAINE, ORONO

MAIRHUBER, JOHN C; SUMMER AND INSERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007147); 20 MONTHS \$52,139

### UNIVERSITY OF MAINE, PORTLAND-GORHAM

FOSTER, CAROLYN N; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W'007365); 19 MONTHS \$6,178

#### MARYLAND

### NONE; OTHER PROGRAM AWARDS (MAWDS): \$4,176

### MARYLAND STATE DEPARTMENT OF EDUCATION

LATHAM, JAMES W JR; A MULTI-STATE CONFERENCE ON ENVIRON-MENTAL EDUCATION (WOO6808); 12 MONTHS \$9,200

LATHAM, JAMES W JR; A MULTI-STATE CONFERENCE ON ENVIRON-MENTAL EDUCATION (W006808 001), \$435

### MORGAN STATE COLLEGE

FRASER, THOMAS P; SUMMER AND IN-SERVICE INSTITUTE IN SCIENCE AND MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007035); 21 MONTHS \$90,887

TALBOT, WALTER R. ACADEMIC YEAR INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007040); 24 MONTHS \$89,067

#### UNIVERSITY OF MARYLAND, COLLEGE PARK

FEY, JAMES T; SUMMER INSTITUTE IN MATHEMATICS FOR SECON-DARY SCHOOL TEACHERS (WOOTOOT); 10 MONTHS \$46,956

LOCKARD, J DAVID; ACADEMIC YEAR INSTITUTE FOR SCIENCE SU-PERVISORS (W007068); 24 MONTHS \$96,604

JACKSON, STANLEY B; IN SERVICE INSTITUTE IN MATHEMATICS

FOR SECONDARY SCHOOL TEACHERS (WOOTSIT); 19 MONTHS \$16,691 LAYMAN, JOHN W; IN-SERVICE INSTITUTE IN EARTH SCIENCE FOR

SECONDARY SCHOOL TEACHERS (WOOTSEE); 19 MONTHS \$17,136 GOOD, RICHARD A; 1973-74 IN SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOO7640); 25 MONTHS \$16,208

#### MASSACHUSETTS

WEST, ARTHUR J; OTHER PROGRAM AWARDS (GIAWDS); 15 MONTHS \$34,960

### AMERICAN INTERNATIONAL COLLEGE

CEBULA, JOSEPH P; IN-SERVICE INSTITUTE IN CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (WOO7884); 19 MONTHS \$5,410

#### BOSTON COLLEGE

LADD, GEORGE T; IN-SERVICE INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOO6805); 18 MONTHS \$14,064

LADD, GEORGE T; SUMMER INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOSSIS); 10 MONTHS \$42,607

BEZUSZKA, STANLEY J. SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOO6875); 10 MONTHS \$38,093

BEZUSZKA, STANLEY J; IN SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007319); 19 MONTHS \$19,996



LADD, GEORGE T; IN-SERVICE INSTITUTE IN ENVIRONMENTAL SCIENCE EDUCATION FOR SECONDARY SCHOOL TEACHERS (W007501); 19 MONTHS \$12,155

BEZUSZKÁ, STANLEY J. 1975-74 IN-SERVICE INSTITUTE IN MATHE-MATICS FOR SECONDARY SCHOOL TEACHERS (W007641); 25 MONTHS 420.841

### BOSTON STATE COLLEGE

FAIRBANKS III, GEORGE A; IN-SERVICE INSTITUTE IN PHYSICAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (W007421); 19 MONTHS \$12,550

#### BRIDGEWATER STATE COLLEGE

BOUTILIER, ROBERT F; SUMMER INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOTHIN); 10 MONTHS \$23,328 CHICCARELLI, JOSEPH B; IN-SERVICE INSTITUTE IN SCIENCE FOR

SECONDARY SCHOOL TEACHERS (WOOTLES), 19 MONTHS \$38,673

#### COLLEGE OF THE HOLY CROSS

GUNTER JR. ROY C; SUMMER INSTITUTE IN OFFICSIELECTRONICS FOR SECONDARY SCHOOL TEACHERS (WOOSSIS); 10 MONTHS \$54,127

MACDONNELL, ROBERT B; IN-SERVICE INSTITUTE IN PHYSICAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (W007146); 19 MONTHS 88 725.

SULSKI, LEONARD C; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007419); 19 MONTHS \$7,356

#### **EASTERN NAZARENE COLLEGE**

JOHN, FLOYD 1; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007445): 19 MONTHS \$6,765

#### PRAMINGHAM SYATE COLLEGE

MURRAY, JOHN T; IN-SERVICE INSTITUTE IN DESCRIPTIVE AS-TRONOMY FOR SECONDARY SCHOOL TEACHERS (W007441); 19 MONTHS 88668

### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

ZACHARIAS, JERROLD R; SUMMER INSTITUTE IN COURSE AND CUR-RICULUM DEVELOPMENT FOR SECONDARY SCHOOL TEACHERS (W00723); 20 MONTHS \$38,911

#### SIMMONS COLLEGE

BELL, JERRY A; SUMMER INSTITUTE IN CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (WOODSSO): 10 MONTHS \$25.759

#### WORCESTER POLYTECHNIC INSTITUTE

MORTON, RICHARD F; SUMMER AND IN-SERVICE INSTITUTE IN SCIENCE AND MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W00703): 20 MONTHS \$90,722

#### MICHIGAN

ESHLEMAN, J ROSS; OTHER PROGRAM AWARDS (01AWDS): 14 MONTHS \$41,820

### BASTERN MICHIGAN UNIVERSITY

MOORE, JEAN R; IN-SERVICE INSTITUTE IN GENERAL SCIENCE-ISCS FOR SECONDARY SCHOOL TEACHERS (W007J91); 19 MONTHS 48,980

### HOPE COLLEGE

JEKEL, EUGENE C; SUMMER INSTITUTE IN CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (W006821); 10 MONTHS 463,710

FOLKERT, JAY E; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (Woodsis); 10 MONTHS \$53,603

FOLKERT, JAY E: 1971 SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007619); 15 MONTHS \$54,905

## MICHIGAN STATE UNIVERSITY

WAGNER, JOHN; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOGBEL); 10 MONTHS \$47,037 PEABODY, FRANK R; SUMMER INSTITUTE IN BIOLOGY FOR SECON-

DARY SCHOOL TEACHERS (WOGGSST); 10 MONTHS \$90,844
WAGNER, JOHN; SHORT COURSE ON MATHEMATICS FOR SECONDA-

RY SCHOOL TEACHERS (WOOTHES); 10 MONTHS \$19,645

WOODBY, LAUREN G; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOTJTN); 19 MONTHS \$12,440

### NORTHERN MICHIGAN UNIVERSITY

ALLENSTEIN, R V; SUMMER INSTITUTE IN GENERAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (W006976); 10 MONTHS \$29,906

### UNIVERSITY OF DETROIT

MEHLENBACHER, LYLE E; SUMMER AND IN:SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOTDING); 20 MONTHS \$58,181

MEHLENBACHER, LYLE E; IN-SERVICE INSTITUTE IN MATHE-MATICS FOR SECONDARY SCHOOL TEACHERS (WOOTSES); 19 MONTHS 83,613

## WAYNE STATE UNIVERSITY

HOOPER. HENRY O; SUMMER INSTITUTE IN GENERAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOSSES); 10 MONTHS \$9,407

SLABY, HAROLD T; SUMMER AND IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007619); 20 MONTHS 177584

STEVENS, CALVIN L; ACADEMIC YEAR INSTITUTE IN CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (WO07030), 24 MONTHS \$104.668 ROSSMOORE, HAROLD; IN-SERVICE INSTITUTE IN BIOLOGY FOR SECONDARY SCHOOL TEACHERS (WO07414); 19 MONTHS \$11,318

#### WESTERN MICHIGAN UNIVERSITY

ESHLEMAN, J ROSS; SUMMER INSTITUTE IN SOCIOLOGY FOR SECONDARY SCHOOL TEACHERS (Woodsta); 10 MONTHS \$59,807

CLARKE, A BRUCE; SUMMER INSTITUTE IN NATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOGOL); IO MONTHS \$14,838
HELLER, CHARLES; SUMMER INSTITUTE IN GEOGRAPHY FOR

HELLER, CHARLES; SUMMER INSTITUTE IN GEOGRAPHY FOR SECONDARY SCHOOL TEACHERS (WOOMON), IO MONTHS \$45,903 GOODNIGHT, CLARENCE J; IN-SERVICE INSTITUTE IN BIOLOGY FOR

SECONDARY SCHOOL TEACHERS (WOO7340); 19 MONTHS \$16,160
MALLINSON, GEORGE G; INSERVICE INSTITUTE IN SCIENCE AND
MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOO7356); 19
MONTHS \$20,671

### UNIVERSITY OF MICHIGAN-DEARBORN CAMPUS

GRLDERLOOS, ORIN G; SUMMER INSTITUTE IN BIOLOGY FOR SECONDARY SCHOOL TEACHERS (WOOTHIT); 20 MONTHS \$52,458

#### MUNNESOTA

WELCH, WAYNE W; OTHER PROGRAM AWARDS (01AWDS); 12 MONTHS \$37.720

### BEMIDJI STATE COLLEGE

WINTER, WESLEY W; SUMMER INSTITUTE IN PHYSICS FOR SECON. DARY SCHOOL TEACHERS (WOOGS); 10 MONTHS \$47,483

SMITH, GERALD J; IN-SERVICE INSTITUTE IN GENERAL SCIENCE AND MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W0074'6); 19 MONTHS \$12,015

#### ST CLOUD STATE COLLEGE

HOPKINS, HAROLD; SUMMER INSTITUTE IN BIOLOGY, CHEMISTRY AND PHYSICS FOR SECONDARY SCHOOL TEACHERS (W008901); 10 MONTHS \$42,030

HOPKINS, HAROLD: IN-SERVICE INSTITUTE IN ENVIRONMENTAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (W007421); 19 MONTHS \$8,428

## ST MARYOS COLLEGE

SEVERIN, CHARLES; SUMMER INSTITUTE IN BIOLOGY FOR SECONDARY SCHOOL TEACHER: (W006963); 10 MONTHS \$10,202

SEVERIN, BRO CHARLES; IN-SERVICE INSTITUTE IN BIGLOGY FOR SECONDARY SCHOOL TFACHERS (W007469); 19 MONTHS \$10,755

### UNIVERSITY OF MINNESOTA

WELCH, WAYNE W; RESLARCH ON THE DESIGN IMPLEMENTATION, AND EFFICACY OF THE NSF PROGRAM OF COMPREHENSIVE GRANTS FOR TEACHER EDUCATION (17006800); 12 MONTHS \$108.698

WELCH, WAYNE W; RESEARCH ON THE DESIGN IMPLEMENTATION AND EFFICACY OF THE NSF PROGRAM OF COMPREHENSIVE GRANTS FOR TEACHER EDUCATION (W006800 001); 12 MONTHS \$115,204

HOBBIE, RUSSELL K; SUMMER INSTITUTE IN PHYSICS FOR SECONDARY SCHOOL TEACHERS (WOO6992); 10 MONTHS \$55,521

LEWIS, DARRELL R; IN-SERVICE INSTITUTE IN ECONOMICS FOR SECONDARY SCHOOL TEACHERS (W007480), 19 MONTHS \$9.218

#### MISSISSIPPI

## ALCORN AGRICULTURAL AND MECHANICAL COLLEGE

PARKER, HENRY L; IN-SERVICE INSTITUTE IN SCIENCE AND MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007494); 19 MONTHS \$15,652

#### JACKSON STATE COLLEGE

UZODINMA, JOHN E; SUMMER INSTITUTE IN BIOLOGY FOR SECONDARY SCHOOL TEACHERS (W007030); 10 MONTHS \$56,328

### MISSISSIPPI STATE UNIVERSITY

TILLEY, JOHN L; SUMMER INSTITUTE IN SCIENCE AND MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W000827): 10 MONTHS 41,211

#### MISSISSIPPI VALLEY STATE COLLEGE

PILLAI, THANUMALAYA P; IN-SERVICE INSTITUTE IN MATHE-MATICS FOR SECONDARY SCHOOL TEACHERS (W007190); 19 MONTHS \$8,980

### UNIVERSITY OF MISSISSIPPI

HUNEYCUTT, M B; COMPREHENSIVE PROJECT FOR SECONDARY SCHOOL TEACHERS OF SCIENCE (WOODS 65 001); 12 MONTHS \$485.675

### UNIVERSITY OF SOUTHERN MISSISSIPPI

SONNIER, ISADORE L; SUMMER AND IN-SERVICE INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (W007044); 20 MONTHS \$67,606



#### MISSOURI

#### DRURY COLLEGE

ROGERS, PAUL; IN-SERVICE INSTITUTE IN BASIC ECONOMICS FOR SECONDARY SCHOOL TEACHERS (WOOT/80); 10 MONTHS \$2,108

### LINDENWOOD COLLEGE

DELANEY JR, PATRICK F; IN-SERVICE INSTITUTE IN BIOLOGY FOR SECONDARY SCHOOL TEACHERS (WOOTSTY); 19 MONTHS \$6,965

#### NORTHEAST MISSOURI STATE COLLEGE

ROSEBERY, DEAN A; SUMMER INSTITUTE IN ECOLOGY FOR SECONDARY SCHOOL TEACHERS (Woodses); 20 MONTHS \$22,992

### NORTHWEST MISSOURI STATE COLLEGE

DEVORE, ELWIN K; IN-SERVICE INSTITUTE IN BASIC ECONOMICS FOR SECONDARY SCHOOL TEACHERS (W007379); 19 MONTHS \$6,795

### SOUTHBAST MISSOURI STATE COLLEGE

EWBANK, WAYNE E; IN-SERVICE INSTITUTE IN BASIC ECONOMICS FOR SECONDARY SCHOOL TEACHERS (WOO7378); 19 MONTHS \$6,183

### ST LOUIS UNIVERSITY

ANDREWS, JOHN J; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOSD 1); 10 MONTHS \$33,031

ANDREWS, JOHN J; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOT164); 19 MONTHS \$8,768

#### UNIVERSITY OF MISSOURI, COLUMBIA

BURCHAM, PAUL B; SUMMER INSTITUTE FOR SECONDARY SCHOOL TEACHERS (Woodest col); 11 MONTHS 47,541

KUHLMAN, JOHN M: ACADEMIC YEAR INSTITUTE IN ADVANCED ECONOMICS FOR SECONDARY SCHOOL TEACHERS (W007044); 24 MONTHS \$142.512

OCONNOR, WILLIAM C; IN-SERVICE INSTITUTE IN BASIC ECONOMICS FOR SECONDARY SCHOOL TEACHERS (W007474); 19 MONTHS \$23,381

#### UNIVERSITY OF MISSOURI, KANSAS CITY

HUBBELL, KENNETH; IN-SERVICE INSTITUTE IN BASIC ECONOMICS FOR SECONDARY SCHOOL TEACHERS (W007373); 19 MONTHS \$4,674

ANDERSON, ROBERT G; IN-SERVICE INSTITUTE IN BIOLOGY FOR SECONDARY SCHOOL TEACHERS (WOOTHT); 19 MONTHS \$15,616

#### UNIVERSITY OF MISSOURI, ROLLA

FULLER, HAROLD Q; SUMMER INSTITUTE IN PHYSICAL SCIENCES AND MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W006828); 10 MONTHS \$75,804

ADAMS, CURTIS; IN-SERVICE INSTITUTE IN BASIC ECONOMICS FOR SECONDARY SCHOOL TEACHERS (W007376); 19 MONTHS \$5,347

### UNIVERSITY OF MISSOURI. ST LOUIS

MCKENNA, JOSEPH P; IN-SERVICE INSTITUTE IN BASIC ECONOMICS FOR SECONDARY SCHOOL TEACHERS (W907J17); 19 MONTHS \$5,666

### MONTANA

#### MONTANA STATE UNIVERSITY

AMEND, JOHN R; SUMMER INSTITUTE IN NUCLEAR AND INSTRU-MENTAL CHEMISTRY FOR NECONDARY SCHOOL TEACHERS (WOM819); to MONTHS \$15.958

## MONTANA SUPERINTENDENT OF PUBLIC INSTRUCTION

NICHOLSON, ALAN D; IN SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007147); 19 MONTHS \$45,120

#### UNIVERSITY OF MONTANA

TIBBS, JOHN F; SUMMER INSTITUTE IN FIELD BOTANY FOR SECON. DARY SCHOOL TEACHERS (W006351); 10 MONTHS \$29,133

MYERS, WILLIAM M; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W006986): 10 MONTHS \$60,715

### NEBRASKA

### NEBRASKA WESLEYAN UNIVERSITY

FRENCH JR. WALTER R: SUMMER INSTITUTE FOR SECONDARY SCHOOL TEACHERS (WOO7932), 10 MONTHS \$65,580

### UNIVERSITY OF NEBRASKA AT LINCOLN

SCHNEIDER, HUBERT H; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOSELS); 10 MONTHS \$44,970

DAVIDSON, JOHN F; SUMMER INSTITUTE IN BIOLOGY FOR SECON-DARY SCHOOL TEACHERS (WOOTGJI); 10 MONTHS \$27,562

BECKMANN, MILTON W: SHORT COURSE ON MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOT296); 10 MONTHS \$16,198

### UNIVERSITY OF NEBRASKA AT OMAHA

BROOKS, MERLE E; IN-SERVICE INSTITUTE IN CHEMISTRY, PHYSICS, BIOLOGY AND SCIENCE EDUCATION FOR SECONDARY SCHOOL TEACHERS (W007496): 19 MONTHS \$16,287

#### NEVADA

#### UNIVERSITY OF NEVADA, RENO

TRENT, JOHN H: IN-SERVICE INSTITUTE IN ENVIRONMENTAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOTUS); 19 MONTHS 410,21:

#### NEW HAMPSHIRE

#### DARTMOUTH COLLEGE

BALLARD, WILLIAM W; IN-SERVICE INSTITUTE IN BIOLOGY FOR SECONDARY SCHOOL TEACHERS (WOOTUS); 19 MONTHS \$8,885

#### UNIVERSITY OF NEW HAMPSHIRB, DURHAM

AMELL, ALEXANDER R; SUMMER INSTITUTE IN CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (WOOSSO); 10 MONTHS \$59,602

BALONENOS, RICHARD H; SUMMER INSTITUTE IN MATHEMATICS CURRICULUM FOR SECONDARY SCHOOL TEACHERS (WOOD919); 20 MONTHS \$45,084

BALOMENOS, RICHARD H; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOGOE); 20 MONTHS \$69,114

#### **NEW JERSEY**

#### DREW UNIVERSITY

GREENSPAN, BERNARD; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007014); 10 MONTHS \$51,848 GREENSPAN, BERNARD; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007405); 19 MONTHS \$9,268

### MONTCLAIR STATE COLLEGE

MALETSKY, EVAN M; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOGSS); 10 MONTHS \$60,963

ZABADY, ALBERT; IN-SERVICE INSTITUTE IN CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (W007333); 19 MONTHS \$12,517

### NEWARK COLLEGE OF ENGINEERING

LANDSMAN, LEON D: IN-SERVICE INSTITUTE IN PHYSICS FOR SECONDARY SCHOOL TEACHERS (WOO7359); 19 MONTHS \$7,897

DROUGHTON, JOHN; IN-SERVICE INSTITUTE IN URBAN AND EN-VIRONMENTAL ENGINEERING FOR SECONDARY SCHOOL TEACHERS (WOOTHS); 19 MONTHS \$1,740

#### PRINCETON UNIVERSITY

DORF, ERLING; SHORT COURSE ON GEOLOGY FOR SECONDARY SCHOOL TEACHERS (W007302); 10 MONTHS \$24,556

#### RUTGERS UNIVERSITY

BARLAZ, JOSHUA; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W006846); 10 MONTHS \$92,388

### ST PETEROS COLLEGE

VARRICHIO, FRANCIS A; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W001492); 19 MONTHS \$4725

#### NEW MEXICO

### NEW MEXICO HIGHLANDS UNIVERSITY

AMAI, ROBERT L S; SUMMER INSTITUTE IN SCIENCE AND MATHE-MATICS FOR SECONDARY SCHOOL TEACHERS (W006959); 10 MONTHS \$51,804

### NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY

SMITH, CLAY; IN-SERVICE INSTITUTE IN ENVIRONMENTAL EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (W007485); 19 MONTHS \$10.782

### UNIVERSITY OF NEW MEXICO

MITCHELL, MERLE: SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W006861); 10 MONTHS \$59,324

#### **NEW YORK**

NONE; OTHER PROGRAM AWARDS (01AWDS); \$8,554

#### ADELPHI UNIVERSITY

BETTELHEIM, FREDERICK A; SUMMER AND IN SERVICE INSTITUTE IN CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (W007036); 20 MONTHS \$37,298

LEVINE, EUGENE; SUMMER AND IN-SERVICE INSTITUTES IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007037); 20 MONTHS \$82,929

SIRKIN, LESLIE A; IN-SERVICE INSTITUTE IN ENVIRONMENTAL AWARENESS FOR SECONDARY SCHOOL TEACHERS (W007409); 19 MONTHS \$8,456

### **BROOKHAVEN LABORATORY**

PRICE, GLENN A; IN-SERVICE INSTITUTE IN THE FORMS AND USES OF ENERGY- BASIC SCIENTIFIC CONCEPTS AND THEIR DEVELOP-MENT FOR SECONDARY SCHOOL TEACHERS (AGOGIG): 19 MONTHS \$8,615



#### BROOKLYN COLLEGE

HALPERN, ALVIN; SUMMER AND IN-SERVICE INSTITUTE IN PHYSICS FOR SECONDARY SCHOOL TEACHERS (Wooddd); 20 MONTHS 439.61)

JORDAN, MEYER: IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007406); 10 MONTHS \$24,797

### CITY COLLEGE

KREMER, CHESTER B; IN-SERVICE INSTITUTE IN ENVIRONMENTAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (W007457), 19 MONTHS \$21,299

### CLARKSON COLLEGE OF TECHNOLOGY

JONES JR, GEORGE L; SUMMER INSTITUTE IN MULTIPLE FIELDS FOR SECONDARY SCHOOL TEACHERS (WOOGSBI); 10 MONTHS \$79,670

#### COLLEGE AT BUFFALO

SCHEFLER, WILLIAM C; IN-SERVICE INSTITUTE IN POPULATION AND ENVORONMENTAL PROBLEMS FOR SECONDARY SCHOOL TEACHERS (W007371); 19 MONTHS \$7,864

ZINGARO, JOSEPH S; IN-SERVICE INSTITUTE IN CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (W007436); 19 MONTHS \$8,068

#### COLLEGE AT GENESEO

SELLS, ROBERT L; SUMMER INSTITUTE IN PHYSICS FOR SECONDA-RY SCHOOL TEACHERS (WOOSDEA); 10 MONTHS \$51,497

#### COLLEGE AT NEW PALTZ

WALKER, DONALD A; SUMMER INSTITUTE IN PHYSICS FOR SECON-DARY SCHOOL TEACHERS (W007001); 10 MONTHS \$22,947

#### COLLEGE AT OSWEGO

MARSH, LELAND C; SUMMER INSTITUTE IN BIOLOGY FOR SECONDARY SCHOOL TEACHERS (W007010); 20 MONTHS \$50,369

SALISBURY, ROBERT L; SUMMER INSTITUTE IN BIOLOGY FOR SECONDARY SCHOOL TEACHERS (WOOZOLE); 10 MONTHS \$35,943

#### COLLEGE AT POTSDAM

MAJOR, ALEXANDER G; SUMMER INSTITUTE IN GENERAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (W006915); 10 MONTHS \$56,238

### FORDHAM UNIVERSITY

BRANDE, REV EDWARD W; SUMMER AND IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007199); 20 MONTHS \$84,758

#### HAMILTON COLLEGE

GERE, BREWSTER H; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOTZEZ); 10 MONTHS \$51,307

#### HOFSTRA UNIVERSITY

DAVIS, JERRY B; INSERVICE INSTITUTE IN BIOLOGY FOR SECONDARY SCHOOL TEACHERS (WOOT408); 19 MONTHS \$9,217

#### MANHATTAN COLLEGE

OCONNOR, C LEONARD; SUMMER INSTITUTE IN PHYSICS FOR SECONDARY SCHOOL TEACHERS (Woode)02); 10 MONTHS \$15,744 MCNAMARA, B JOHN; IN-SERVICE INSTITUTE IN MATHEMATICS FOR

# SECONDARY SCHOOL TEACHERS (W007369): 19 MONTHS \$15,410 NEW YORK UNIVERSITY

BURROW, MARTIN D; IN SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY TEACHERS (WOOLLS): 19 MONTHS 489 133

#### PACE COLLEGE

KONDE, ANTHONY J; IN-SERVICE INSTITUTE IN CHEMISTRY AND ASTRONOMY FOR SECONDARY SCHOOL TEACHERS (W007151); 19 MONTHS \$14,079

### POLYTECHNIC INSTITUTE OF BROOKLYN

LIAO, THOMAS. SUMMER INSTITUTE IN ENGINEERING CONCEPTS CURRICULUM PROJECT (EECP) FOR SECONDARY SCHOOL TEACHERS (W00702J); 10 MONTHS \$39,337

FISCHER, GEORGE J; SUMMER INSTITUTE IN CHEMISTRY & PHYSICS FOR SECONDARY SCHOOL TEACHERS (W007024); 10 MONTHS \$38.428

SOEHNGEN, HENRY F; SHORT COURSE ON MUNICIPAL WASTE DISPOSAL FOR SECONDARY SCHOOL TEACHERS (W007198); 10 MONTHS \$14218

#### PRATT INSTITUTE

OGORMAN, JOHN MICHAEL: SUMMER INSTITUTE IN CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (WOOT209); 10 MONTHS \$35,336

#### QUEENS COLLEGE

ZEVIN, JACK; IN-SERVICE INSTITUTE IN SOCIOLOGY FOR SECONDARY SCHOOL TEACHERS (W007488); 19 MONTHS \$23,531

### RENSSELAER POLYTECHNIC INSTITUTE

BUNCE, STANLEY C; SUMMER INSTITUTE IN MULTIPLE FIELDS FOR SECONDARY SCHOOL TEACHERS (W006936); 10 MONTHS \$96,905

EPPENSTEIN, WALTER; SUMMER INSTITUTE IN PHYSICS FOR SECONDARY SCHOOL TEACHERS (W006997); 10 MONTHS \$55,773

### STATE UNIVERSITY AT ALBANY

BOEHM, THOMAS A; SUMMER INSTITUTE IN GENERAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (W007003); 10 MONTHS \$47,041

HERLIHY. JOHN G: IN-SERVICE INSTITUTE IN MAN-A COURSE STUDY FOR SECONDARY SCHOOL TEACHERS (W007438); 19 MONTHS \$13,643

#### STATE UNIVERSITY AT BINGHAMTON

COATES, DONALD R; IN-SERVICE INSTITUTE IN MAN A COURSE OF STUDY FOR SECONDARY SCHOOL TEACHSRS (W001388); 19 MONTHS \$8,981

### STATE UNIVERSITY AT BUFFALO

CAVIOR, STEPHAN R; SUMMER INSTITUTE IN MATHEMATICS FO.3 SECONDARY SCHOOL TRACHERS (WOODS): 10 MONTHS \$40,116

#### SYRACUSE UNIVERSITY

SCHAFF, JOHN; 1911 SUMMER INSTITUTE IN GENERAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOODS 501); \$4,509

EXNER. ROBERT M; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W008907); 10 MONTHS \$46,150 SCHAFER, LARRY; SUMMER INSTITUTE IN GENERAL SCIENCE FOR

SECONDARY SCHOOL TEACHERS (WOOG947); 10 MONTHS \$48,415 GINSBURG, NATHAN; SUMMER INSTITUTE IN PHYSICS AND CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (WOOG979); 10

MONTHS \$41,460
COLLETTE, ALFRED T: ACADEMIC YEAR INSTITUTE IN THE PREPARATION OF SCIENCE SUPERVISORS FOR SECONDARY SCHOOL TEACHERS (W007059); 24 MONTHS \$100,535

COLLETTE, ALFRED T; INSERVICE INSTITUTE IN PHYSICAL SCIENCE ISCS FOR SECONDARY SCHOOL TEACHERS (W007394); 19 MONTHS 49,904

#### TEACHERS COLLEGE

VOGELI, BRUCE R; SCHOOL INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOO7008); 10 MONTHS \$51,849

#### UNION COLLEGE

GILLETTE, EDWIN F; SUMMER INSTITUTE IN MULTIPLE FIELDS FOR SECONDARY SCHOOL TEACHERS (WOO6953); 10 MONTHS \$109,808 GILLETTE, EDWIN F; IN-SERVICE INSTITUTE IN COMPUTER SCIENCE AND CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (WOO7403); 19 MONTHS \$13,419

### VASSAR COLLEGE

JOHNSEN, JOHN H; SUMMER INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (W007213); 10 MONTHS \$45,923

## YESHIVA UNIVERSITY

GELBART. ABE; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007454); 19 MONTHS \$109.850

AMERICAN MUSEUM OF NATURAL HISTORY-HAYDEN PLANETARIUM CHARTRAND III, MARK R; SHORT COURSE ON ASTRONOMY FOR SECONDARY SCHOOL TEACHERS (WOO7299); 10 MONTHS \$16,358

### NORTH CAROLINA

### DUKE UNIVERSITY

GITHENS JR, SHERWCOD; SUMMER INSTITUTE IN SCIENCE AND MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W006934); 10 MONTHS \$100,246

#### EAST CAROLINA UNIVERSITY

SHEPPARD, MOSES M; SUMMER INSTITUTE IN GENERAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOO1213); 10 MONTHS \$67,851 SOWELL, KATYE O; IN-SERVICE INSTITUTE IN MATHEMATICS FOR

SOWELL, KATYE O; IN-SERVICE INSTITUTE IN MATHEMATICS I SECONDARY SCHOOL TEACHERS (W007417); 19 MONTHS \$11,987

#### ELIZABETH CITY STATE UNIVERSITY

SUTTON, LOUISE N; SUMMER AND IN-SERVICE INSTITUTE IN PHYSICAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (W007197); 20 MONTHS \$60.850

### MARS HILL COLLEGE

OUTTEN, L M; SHORT COURSE ON BIOLOGY (BSCS GREEN VERSION)
FOR SECONDARY SCHOOL TEACHERS (W007310); 10 MONTHS \$9,023

### NORTH CAROLINA ACADEMY OF SCIENCE

REARDON, ANNA JOYCE; IN-SERVICE INSTITUTE IN RECENT AD-VANCES IN PHYSICS FOR SECONDARY SCHOOL TEACHERS (W0073J7); 19 MONTHS \$5,261

### MORTH CAROLINA AGRICULTURAL & TECH STATE UNIV

GRAVES, ARTIS P; SUMMER INSTITUTE IN BIOLOGY FOR SECONDA-RY SCHOOL TEACHERS (WOOS866); 10 MONTHS \$53,917

#### UNIVERSITY OF NORTH CAROLINA AT ASHEVILLE

SQUIBB, S DEXTER; IN-SERVICE INSTITUTE IN CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (WOOZ440); 19 MONTHS \$7,509

### UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

HOUNSHELL, PAUL B; SUMMER INSTITUTE IN BIOLOGY FOR SECONDARY SCHOOL TEACHERS (W006924); 10 MONTHS \$41,888



WHITE, WILLIAM A; IN-SERVICE INSTITUTE IN PHYSICAL GEOLOGY FOR SECONDARY SCHOOL TEACHERS (W007444): 19 MONTHS \$1,927

#### WAKE FOREST UNIVERSITY

SEELBINDER, BEN M; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (#007400): 19 MONTHS \$11,072

#### WESTERN CAROLINA UNIVERSITY

CHAPMAN, JOHN J; SUMMER INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOO6999), 10 MONTHS \$32,107

#### **NORTH BAKOTA**

#### MINOT STATE COLLEGE

RICKEL, DAVID; SUMMER INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (W007210); 10 MONTHS \$31,460

### NORTH DAKOTA STATE UNIVERSITY

BROBERG, JOEL W; SUMMER INSTITUTE IN CHEMISTRY, PHYSICS AND ZOOLOGY FOR SECONDARY SCHOOL TEACHERS (W006961); 10 MONTHS \$38,033

KOOB, ROBERT D; IN-SERVICE INSTITUTE IN CHEMISTRY VIDEO TAPED FOR SECONDARY SCHOOL TEACHERS (WOOTSOI); 19 MONTHS \$12,282

## UNIVERSITY OF NORTH DAKOTA

BEHRINGER, M. P.; SUMMER INSTITUTE IN SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOGOES), 10 MONTHS \$64,813

HOWELL, FRANCIS L: IN-SERVICE INSTITUTE IN PHYSICS FOR SECONDARY SCHOOL TEACHERS (W007854); 19 MONTHS \$3,710

RAMSETT, DAVID E: IN-SERVICE INSTITUTE IN ELEMENTARY ECONOMICS AND ECONOMIC EDUCATION FOR SECONDARY SCHOOL TEACHERS (W00744); 19 MONTHS \$9,113

#### OHIO

### ANTIOCH COLLEGE

CORWIN, JAMES F; SUMMER INSTITUTE IN GENERAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOCHU); 10 MONTHS \$87,520

#### ASHLAND COLLEGE

TARBUCK, GEORGE; IN-SERVICE INSTITUTE IN ECONOMICS FOR SECONDARY SCHOOL TEACHERS (WOOTUSE); 19 MONTHS \$3,700

#### BALDWIN-WALLACE COLLEGE

MILLER, JOHN W; SHORT COURSE ON THE LABORATORY CULTURE AND USE OF MARINE ORGANISMS FOR SECONDARY SCHOOL TEACHERS (W007504): 10 MONTHS \$9,687

### BOWLING GREEN STATE UNIVERSITY

LEETCH, 1 FREDERICK; 1970-71 ACADEMIC YEAR INSTITUTE IN MATHEMATI: S FOB SECONDARY SCHOOL TEACHERS (WOOD14 001); 9 MONTHS \$1,869

KIRBY, WILLIAM A: SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOGSTO); 10 MONTHS \$48,231

HALL, W. H. SUMMER INSTITUTE IN CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (WOOS988); 10 MONTHS \$74,961

LEETCH, J FREDERICK; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007929), 19 MONTHS \$20,496

LEETCH, J FREDERICK; 1974-74 IN-SERVICE INSTITUTE IN MATHE-MATICS FOR SECONDARY SCHOOL TEACHERS (W007654); 25 MONTHS \$19,306

### CENTRAL STATE UNIVERSITY

HOLMES, DEFIELD T: SUMMER INSTITUTE IN BIOLOGY FOR SECONDARY SCHOOL TEACHERS (WOOZOZZ); 10 MONTHS \$44,893

### JOHN CARROL & UNIVERSITY

NASH, HARBER SUMMER INSTITUTE IN PHYSICS FOR SECONDARY SCHOOL TEACHERS (W006960); 10 MONTHS \$6,818

NASH, HARR: C. IN-SERVICE INSTITUTE IN PHYSICS FOR SECONDA-RY SCHOOL TEACHERS (W007464); 19 MONTHS \$14,113

NASH, HARRY C, IN-SERVICE INSTITUTE IN PHYSICS FOR SECONDA-RY SCHOOL TEACHERS (W007473): 19 MONTHS \$14,264

NASH, HARRY C. IN-SERVICE INSTITUTE IN PHYSICS FOR SECONDA-RY SCHOOL TEACHERS (W007475 001); 45,900

### KENT STATE UNIVERSITY

CUMMINS, KENNETH B; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOSSIT); 10 MONTHS \$58,949

CUMMINS, KENNETH B; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOT#95); 19 MONTHS \$10,678

PHILLIPS JR. JAMES A; IN-SERVICE INSTITUTE IN SOCIAL SCIENCE-MAN- A COURSE OF STUDY-CDA NETWORK FOR SECONDARY SCHOOL TEACHERS (#0074\*\*): 19 MONTHS \$10,967

#### MIAMI UNIVERSITY

WEIDNER, BRUCE V; SUMMER INSTITUTE IN MULTIPLE FIELDS FOR SECONDARY SCHOOL TEACHERS (WOOSSES); 10 MONTHS \$58,651 VAUGHN, CHARLES M; IN-SERVICE INSTITUTE IN AQUATIC BIOLO-GY FOR SECONDARY SCHOOL TEACHERS (WOOTLED); 19 MONTHS \$9,689

### ONIO DOMINICAN COLLEGE

MATESICH, SR MARY ANDREW; IN-SERVICE INSTITUTE IN BIOLOGY AND CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (W00744I); 19 MONTHS \$4,822

#### OHIO STATE UNIVERSITY

SPIEKER, EDMUND M; SUMMER INSTITUTE IN GEOLOGY FOR SECONDARY SCHOOL TEACHERS (WOOSSID), 10 MONTHS \$54,963

RINER, JOHN; SUMMER INSTITUTE IN MATHEMATICS FOR SECON-DARY SCHOOL TEACHERS (W006970); 10 MONTHS \$90,423

MAYER, VICTOR J; SUMMER INSTITUTE IN ENVIRONMENTAL SCIENCES FOR SECONDARY SCHOOL TEACHERS (W007041); 20 MONTHS 481,294

MAYER, VICTOR J. SHORT COURSE ON JUNIOR HIGH SCHOOL SCIENCE PROGRAMS FOR PRINCIPALS AND CURRICULUM SUPER-VISORS (W007305): 10 M NTHS \$18,695

RILEY, WILLIAM R; IN SERVICE INSTITUTE IN PHYSICS FOR SECON-DARY SCHOOL TEACHERS (W007359); 19 MONTHS \$11,930

MAYER, VICTOR J; IN-SERVICE INSTITUTE IN ASTRONOMY (IAP) FOR SECONDARY SCHOOL TEACHERS (WOOTJE); 19 MONTHS \$9,862

#### OHIO UNIVERSITY

WARMKE, ROMAN; 1970-71 IN-SERVICE INSTITUTE IN ECONOMIC EDUCATION FOR SECONDARY SCHOOL TEACHERS (WOOS416 001); 11 MONTES \$1,000

MALCOM, PAUL S; SUMMER INSTITUTE IN MATHEMATICS FUR SECONDARY SCHOOL TEACHERS (WOOSSES); 10 MONTHS \$45,209

WARMKE, ROMAN F; SUMMER INSTITUTE IN CONSUMER ECONOMICS FOR SECONDARY SCHOOL TEACHERS (WOOS991); 10 MONTHS \$47,201

DRAAYER, GERALD F: IN-SERVICE INSTITUTE IN ECONOMIC EDU-CATION FOR SECONDARY SCHOOL TEACHERS (W001488): 19 MONTHS \$17,022

### OHIO WESLEYAN UNIVERSITY

RUSSELL, LEONARD N; SUMMER INSTITUTE IN PHYSICAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOO6984); 10 MONTHS \$61,950

#### UNIVERSITY OF CINCINNATI

ROLWING, RAYMOND H; 1971-78 ACADEMIC YEAR INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOGS 62 001); \$7,638

HUETHER, CARL A; SUMMER INSTITUTE ON THE POPULATION EX-PLOSION FOR SECONDARY SCHOOL TEACHERS (W007018); 10 MONTHS \$44,728

ROLWING, RAYMOND H; ACADEMIC YEAR INSTITUTE IN MATHE-MATICS FOR SECONDARY SCHOOL TEACHERS (W007019); 24 MONTHS \$135,945

ROLWING, RAYMOND H; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007373); 19 MONTHS \$24,903

## UNIVERSITY OF DAYTON

MUSHENHEIM, H G; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOGSS9); 10 MONTHS \$58,123

## UNIVERSITY OF TOLEDO

GIBNEY, THOMAS C; CONTRACT FOR AN EVALUATION OF SUMMER INSTITUTES FOR SECONDARY SCHOOL TEACHERS OF SCIENCES AND MATHEMATICS (C677000); 12 MONTHS \$63,834

#### **ONLAHOMA**

#### NORTHWESTERN STATE COLLEGE

ROGERS, STEARNS WALTER; IN-SERVICE INSTITUTE IN BIOLOGY FOR SECONDARY SCHOOL TEACHERS (WOO! 101); 19 MONTHS 86,810

### OKLAHOMA STATE UNIVERSITY

KOPECKY, H P; SUMMER INSTITUTE IN ECONOMICS FOR SECONDARY SCHOOL TEACHERS (WOOGSEF); 10 MONTHS \$64,245

STONE, JOHN E; SUMMER INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (V/co6945); 10 MONTHS \$34218

PURVIS, J ROBERT: IN-SERVICE INSTITUTE IN MAN- A COURSE OF STUDY (ANTHROPOLOGY) FOR SECONDARY SCHOOL TEACHERS (W007498); 19 MONTHS \$11,702

### Southeastern State College

DWIGHT, LESLIE A; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W006906); 10 MONTHS \$59,860

### SOUTHWESTERN STATE COLLEGE

HAMM, DONALD I; SUMMER INSTITUTE IN GENERAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOO6828); 10 MONTHS \$60,928

MCKELLIPS, RAYMOND L; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOO6858); 10 MONTHS \$61,177

MCKELLIPS, RAYMOND L; 1973 SUMMER INSTITUTE IN MATHE-MATICS FOR SECONDARY SCHOOL TEACHERS (W007432); 24 MONTHS \$61,199



## UNIVERSITY OF OKLAHOMA

Andreb, Richard V: 1870-11 In Service Institute in computer PROGRAMMING AND RELATED MATHEMATICS FOR SECO: IDARY SCHOOL TEACHERS (WOOSST) 007), 81,700 STOEVER JR, EDWARD C; SUMMER INSTITUTE IN EARTH SCIENCE

FOR SECONDARY SCHOOL TEACHERS (WOOGSIS); 10 MONTHS 161,286

STOEVER JR. EDWARD C: SUMMER INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOSPET): 10 MONTHS \$85,756

LARSH, HOWARD W. SUMMER INSTITUTE IN BIOLOGY FOR SECON-DARY SCHOOL TEACHERS (WOOLSE); IV MONTHS \$69,544

LEVY, GENE; SUMMER INSTITUTE IN MATHEMATICS FOR SECON. DARY SCHOOL TEACHERS (WOOSSAS); 10 MONTHS \$51,599

STORVER IR, EDWARD C: ACADEMIC YEAR INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOTOST); 24 MONTHS 1161369

ANDREE, RICHARD VI INSERVICE INSTITUTE IN COMPUTER PRO-GRAMMING AND NATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W00741/k 19 MONTHS \$49,969)

#### OFFICE

### ROUCATIONAL COORDINATING COUNCIL

MAIER, EUGENE A; OREGON SYSTEM IN MATHEMATICS EDUCATION (SUMMER PORTION) (WOOMEN); ? MONTHS \$194253 MAIER, EUGENE A; OREGON SYSTEM IN MATHEMATICS EDUCATION

(W004417 001); 12 MONTHS \$846,252

### OREGON COLLEGE OF EDUCATION

REDBIRD-SELAM, HELEN M; SUMMER INSTITUTE IN SOCIOLOGY FOR SECONDARY SCHOOL TEACHERS (WOOT407); 20 MONTHS 462,843

CALLACHER, JAKES W. SUMMER INSTITUTE IN GEOGRAPHY FOR SECONDARY SCHOOL TEACHERS (WOOTHJE); 10 MONTHS \$71,626

### OREGON STATE UNIVERSITY

FOX, FRED W; SUMMER INSTITUTE IN MULTIPLE FIELDS FOR

SECONDARY SCHOOL TEACHERS (WOOSOO); 10 MONTHS (54,47)
WILLIAMSON, STANLEY E; ACADEMIC YEAR INSTITUTE IN BASIC
SCIENCES (EMPHASIS ON PHYSICAL SCIENCE) FOR SECONDARY SCHOOL TEACHERS (WOOTOUS); 24 MONTHS \$137,187

SIMONS, WILLIAM H; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007234); 10 MONTHS \$11,500

DAVIS, KENNETH E; IN-SERVICE INSTITUTE IN ENGINEERING CON. CEPTS CURRICULUM PROIECT FOR SECONDARY SCHOOL TEACHERS (W007450): 19 MONTHS \$6,939

### SOUTHERN OREGON COLLEGE

MCCOY, ROBERT A; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOSSII), 10 MONTHS \$11,500

PURDOM, WILLIAM B; SUMMER INSTITUTE IN SCIENCE FOR SECON-DARY SCHOOL TEACHERS (WOOTOOD); 10 MONTHS \$55,157

### UNIVERSITY OF OREGON - EUGENE

MOURSUND, A F; 1870-71 ACADEMIC YEAR INSTITUTE IN MATHE. MATICS FOR SECONDARY SCHOOL TEACHERS (WOOLTBB 001); \$2,121 MOURSUND, DAVID G; SUMMER INSTITUTE IN COMPUTER SCIENCE

FOR SECONDARY SCHOOL TEACHERS (WOOTESE); 10 MONTHS \$11,500 MOURSUND, A F; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOTAIS): 10 MONTHS \$11,500

### UNIVERSITY OF PORTLAND

WACK, PAUL E; SUMMER INSTITUTE IN INTEGRATED PHYSICS-CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (W006903); 10 MONTHS \$51,621

#### PENNSYLVANIA

### BRAYER COLLEGE

BREYER, ARTHUR C: SUMMER INSTITUTE IN CHEMISIRY FOR SECONDARY SCHOOL TEACHERS (WOGGGJ2); 10 MONTHS \$56,992 CAMERON, SAMUEL M; SUMMER INSTITUTE IN SOCIAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOTHER): 10 MONTHS \$60,670

URICCHIO, WILLIAM A: IN-SERVICE INSTITUTE IN BIOLOGY FOR SECONDARY SCHOOL TEACHERS (WOOTST); 19 MONTHS \$11,891

### DREXEL UNIVERSITY

FIELDS, EWAUGH F: SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOTHIN): 10 MONTHS \$35,206

HAMMAN, ROBERT L: SUMMER AND IN-SERVICE INSTITUTE IN CONOMICS FOR SECONDARY SCHOOL TEACHERS (W001219): 20 OFE,004 EHTHOM

### SDINBORO STATE COLLEGE

SCHNEIDER, MICHAEL C; IN-SERVICE INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOTISE); 19 MONTHS \$18.216

### FRANKLIN AND MARSHALL COLLEGE

KAUFFMAN, MARVIN E: SUMMER INSTITUTE IN EARTH ECIENCE FOR SECONDARY SCHOOL TEACHERS (WOOSSID): 10 MONTHS \$11,064

KAUFFMAN, MARVIN E: 1973 SUMMER INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOTASE); 15 MONTHS \$78.577

### GANNON COLLEGE

ZAGORSKI, STANLEY J: IN-SERVICE INSTITUTE IN ENVIRONMEN-TAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOTHIS): 19 MONTHS \$13,983

#### LAPAYETTE COLLEGE

SAALFRANK, CHARLES W: IN-SERVICE INSTITUTE IN MATHE. MATICS FOR SECONDARY TEACHERS (W007486); 19 MONTHS \$11,195

TAYLOR, DOUGLAS H; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOODSES); 10 MONTHS \$39,902

#### MILLERSVILLE STATE COLLEGE

MCILWAINE, WILLIAM B. IN-SERVICE INSTITUTE IN BIOLOGY AND EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOTSOT): 19 MONTHS \$17,208

#### PENNSYLVANIA STATE UNIVERSITY

HEIMER, RALPH T; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS AND SUPERVISORS (W007017); 10 MONTHS #42,337

BELL, PAUL E; SUMMER INSTITUTE IN GENERAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOTORS); 10 MONTHS \$48,588

JANSSON, LARS C: IN-SERVICE INSTITUTE IN MATHEMATICS AND COMPUTERS FOR SECONDARY TEACHERS (WOOT 183); 19 MONTHS \$14,768

#### SETON HILL COLLEGE

RACZKOWSKI, BARBARA: SUMMER INSTITUTE IN ENVIRONMENTAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOMON); 10 MONTHS \$48,177

### TEMPLE UNIVERSITY

SLOOK, THOMAS H; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOTHIS): 19 MONTHS \$13,436

SCHMUCKLER, JOSEPH S; IN-SERVICE INSTITUTE IN INSTRUMEN-TAL METHODS FOR SECONDARY SCHOOL TEACHERS (WOOTLIN), 19 MONTHS \$8,354

MARTORELLA, PETER H; IN-SERVICE INSTITUTE IN ANTHROPOLOGY- FOCUS ON THE URBAN WORLD FOR SECONDARY SCHOOL TEACHERS (W007491); 19 MONTHS \$17,905

### THEEL COLLEGE

INGERSOLL, RONALD J: SUMMER INSTITUTE IN BIOLOGY FOR SECONDARY SCHOOL TEACHERS (WOOT202); 10 MONTHS \$37,623

### UNIVERSITY OF PENNSYLVANIA

GEORGE, KENNETH D: IN-SERVICE INSTITUTA IN ENGINEERING CONCEPTS CURRICULUM PROJECT FOR SECONDARY SCHOOL TEACHERS (W007444); 19 MONTHS \$14,195

GIRAULT, EMILY S; IN-SERVICE INSTITUTE IN ANTHROPOLOGY AND SOCIOLOGY FOR SECONDARY SCHOOL TEACHERS (WOOTILE): 19 MONTHS \$22,373

### UNIVERSITY OF SCRANTON

BEIDLER, JOHN; SUMMER INSTITUTE IN MATHEMATICS AND COM-PUTER SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOSSID); 6 MONTHS \$30 140

STRICKLAND, HARRY B; IN SERVICE INSTITUTE IN SCIENCE FOR SECONDARY TEACHERS (WOOT (65); 19 MONTHS \$13,876

### **VILLANOVA UNIVERSITY**

EHRMANN, SR M CORDIA; IN-SERVICE INSTITUTE IN SCIENCE AND MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007338); 19 MONTHS \$34.851

### WEST CHESTER STATE COLLEGE

BRANTON, RICHARD G; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOO7470); 19 MONTHS \$24,706

### PENNSYLVANIA STATE UNIVERSITY-MCKEESPORT CAMPUS

FETTE, C WILLIAM; INSERVICE INSTITUTE IN MODERN PHYSICS AND CHEMISTRY WITH COMPUTER APPLICATIONS FOR SECONDARY SCHOOL TEACHERS (WOO7436); 19 MONTHS \$11,288

### **PUERTO RICO**

### UNIVERSITY OF PUERTO RICO SYSTEM OFFICE-CAYEY UNIVERSITY COLLEGE

GARCIA, MARIANO; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOGSTT); 10 MONTHS \$49,764

#### RHODE ISLAND

#### BROWN UNIVERSITY

ESCHENBACHER, HERMAN F; ACADEMIC YEAR INSTITUTE IN SCIENCE INSTRUCTION IN URBAN SCHOOLS FOR SECONDARY SCHOOL TEACHERS (W007045); 24 MONTHS 444,235

#### SOUTH CAROLINA

### CITADEL THE MILITARY COLLEGE OF SOUTH CAROLINA

INGRAHAM, J R: 1970-71 IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOS631 001); 8 MONTHS \$110 INGRARAM, J R: IN SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOO7326): 19 MONTHS \$10,160

#### SOUTH CAROLINA STATE COLLEGE

ROACHE, LEWIE C; SUMMER INSTITUTE IN SCIENCE FOR SECONDA.

RY SCHOOL TEACHERS (WOOTOSS); 10 MONTHS \$47,554
ROACHE, LEWIE C; IN-SERVICE INSTITUTE IN BIOLOGY AND
CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (WOOTS \$49), 19 MONTHS \$20.298

### UNIVERSITY OF SOUTH CAROLINA

WAHAB, J H; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDA-RY SCHOOL TEACHERS (WOOSSAS); 10 MONTHS \$38,229

### SOUTH DAKOTA

### MOUNT MARTY COLLEGE

FASBENDER, SR VERONICA; SUMMER INSTITUTE IN BIOLOGY FOR SECONDARY SCHOOL TEACHERS (WOOTZOS); 10 MONTHS \$47,814

#### UNIVERSITY OF SOUTH DAKOTA

ESTEE, CHARLES R: COMPREHENSIVE INSTITUTIONAL PROJECT FOR IN-SERVICE TEACHER EDUCATION (WOOSISS OOI): 12 MONTHS \$420,067

ERMAN, WILLIAM E; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOGOZE); 10 MONTHS \$33,572

#### TENNESSEE

#### CHRISTIAN BROTHERS COLLEGE

DOODY. EDWARD; SUMMER INSTITUTE IN INTRODUCTORY PHYSI-CAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOGSAS): 10 MONTHS \$59,062

HULL JR, GEORGE; SUMMER INSTITUTE IN MULTIPLE FIELDS FOR SECONDARY SCHOOL TEACHERS (WOO6909); 10 MONTHS \$64,780

### GEORGE PEABODY COLLEGE FOR TEACHERS

TOMLINSON, GUS; SUMMER INSTITUTE IN MULTIPLE FIELDS FOR SECONDARY SCHOOL TEACHERS (Woos931); 10 MONTHS \$84,295

#### KNOXVILLE COLLEGE

COOPER, TRENTON: IN SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOUTJEL); 19 MONTHS \$7,673

### MIDDLE TENNESSEE STATE UNIVERSITY

WISER, J ELDRED, SUMMER INSTITUTE IN SCIENCE AND MATHE. MATICS FOR SECONDARY SCHOOL TEACHERS AND SUPERVISORS (W008941); 10 MONTHS \$81,125

### TENNESSEE STATE UNIVERSITY

GASAWAY, SADIE C; SHORT COURSE ON MATHEMATICS FOR SECON-DARY SCHOOL TEACHERS (W007J07); 10 MONTHS \$11,459

### TENNESSEE TECHNOLOGICAL UNIVERSITY

FLETCHER JR. RICHARD K: INSERVICE INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOTUS); 19 MONTHS \$7,432

### UNIVERSITY OF THE SOUTH

ELLIS, ERIC H; SUMMER INSTITUTE IN SCIENCE AND MATHE-MATICS FOR SECONDARY SCHOOL TEACHERS (WOOS940); 10 MONTHS \$60,558

### VANDERBILT UNIVERSITY

RAY, OAKLEY S; 1971 SUMMER CONFERENCE ON DRUG USE AND ABUSE FOR SECONDARY SCHOOL TEACHERS (Woods 26 001); \$3,500 RAY, OAKLEY S; SHORT COURSE ON DRUG USE AND ABUSE FOR

SECONDARY SCHOOL TEACHERS (Woorjoo), 19 MONTHS \$33,749 RAY, OAKLEY S; SHORT COURSE IN DRUG USE AND ABUSE FOR

SECONDARY SCHOOL TEACHERS (W007J00 001); \$3,604

### TEXAS

### **BAYLOR UNIVERSITY**

TWEEDIE, VIRGIL L; SUMMER INSTITUTE IN MULTIPLE FIELDS FOR SECONDARY SCHOOL TEACHERS (W007029); 10 MONTHS \$49,321

### EAST TRYAS STATE UNIVERSITY

ROHRER, CHARLES S; SUMMER INSTITUTE IN PHYSICAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOGASE); 10 MONTHS \$58,027

#### INCARNATE WORD COLLEGE

ARMER, SR JOSEPH MARIE: IN SERVICE INSTITUTE IN BIOLOGY AND PHYSICAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (W007414): 19 MONTHS \$11,835

MATTHEWS III. WILLIAM H: SUMMER INSTITUTE IN EARTH SCIENCE (ESCP) FOR SECONDARY SCHOOL TEACHERS (WOOGSLI): 10 MONTHS \$44.686

RIGNEY, CARL J; SUMMER INSTITUTE IN PHYSICS AND ASTRONOMY FOR SECONDARY SCHOOL TEACHERS (WOMERS): 10 MONTHS \$43,761

### NORTH TEXAS STATE UNIVERSITY

LUKER, WILLIAM A; SUMMER INSTITUTE IN ECONOMICS FOR SECONDARY SCHOOL TEACHERS (WOO6854); 10 MONTHS \$35,566

YEST, FLOYD; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOTJAY); 19 MONTHS \$8,027

LUKER, WILLIAM A: IN-SERVICE INSTITUTE IN ECONOMICS FOR SECC YDARY SCHOOL TEACHERS (WOOT 168): 19 MONTHS \$8,462

#### Sam Houston by ate university

MANKA, CHARLES K; SUMMER INSTITUTE IN ASTRONOMY FOR SECONDARY SCHOOL TEACHERS (W 455-44); 10 MONTHS \$35,114

### Southern methodist university

MECOM, JOHN O; SUMMER INSTITUTE IN BIOLOGY FOR SECONDARY SCHOOL TEACHERS (WOOTESO); 10 MONTHS \$9,833

#### TEXAS A. & M UNIVERSITY

SCHROEDER, MELVIN C; SUMMER INSTITUTE IN EARTH SCIENCES FOR SECONDARY SCHOOL TEACHERS (W006833); 10 MONTHS \$64,998 SCHROEDER, MELVIN C; IN-SERVICE INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOT(41); 19 MONTHS

#### TEXAS SOUTHERN UNIVERSITY

TERRY, ROBERT J: SUMMER INSTITUTE IN BIOLOGY FOR SECONDA-RY SCHOOL TEACHERS (WOOSPLE); 10 MONTHS \$84,603

#### TEXAS TECH UNIVERSITY

RIGGS, CHARLES L; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (Woorlds): 19 MONTHS \$9.636

GRAY, CARNETT G. SUMMER INSTITUTE IN PHYSICS FOR SECONDA-RY SCHOOL TEACHERS (WOO7018); 10 MONTHS \$45,130

### UNIV OF TEXAS AT AUSTIN

LEE, ADDISON E; SUMMER INSTITUTE IN GENERAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOGSII); 10 MONTHS \$72.265 LEE, ADDISON E: ACADEMIC YEAR INSTITUTE IN SCIENCE FOR

SECONDARY SCHOOL TEACHERS (W007055); 24 MONTHS \$121,844

### UNIV OF TEXAS AT EL PASO

MILSON, JAMES L: SHORT COURSE ON ENVIRONMENTAL QUALITY FOR SECONDARY SCHOOL TEACHERS (W007JOJ); 10 MONTHS \$10,324

LEE, ADDISON E; 1974 SUMMER INSTITUTE IN SCIENCES FOR SECONDARY SCHOOL TEACHERS (Wooreju); 14 MONTHS \$70,723

### UNIVERSITY OF HOUSTON

CRESWELL, JOHN L; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOT407); 19 MONTHS \$18,400

### UTAH

### UNIVERSITY OF UTAH

RIDD, MERRILL K; IN-SERVICE INSTITUTE IN EARTH SCIENCE-ESCP FOR SECONDARY SCHOOL TEACHERS (WOO6802); 13 MONTHS \$8,491 WAGNER, FREDRICK R; SUMMER INSTITUTE IN ENGINEERING FOR SECONDARY SCHOOL TEACHERS (WOUTZIG); 10 MONTHS \$36,511

DAVIS, E ALLAN; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007364); 19 MONTHS \$16,043

### **UTAH STATE UNIVERSITY**

HUNSAKER. NEVILLE C; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W006826); 10 MONTHS \$70,859 BRINGHURST, ANTONE H; IN SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOT 167), 19 MONTHS \$9,047

#### VERMONT

## UNIVERSITY OF VERMONT

SCHOONMAKER, N JAMES; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOGBJS); 10 MONTHS \$68,860 SCHOONMAKER, N JAMES: 1975 SUMMER INSTITUTE IN MATHE-MATICS FOR SECONDARY SCHOOL TEACHERS (WOOTALL); 15 MONTHS

\$55,411



### VIRGINIA

#### COLLEGE OF WILLIAM AND MARY

CATO JR, BENJAMIN R; SUMMER INSTITUTE IN MATHEMATICS FGR IECONDARY SCHOOL TEACHERS (Woods14); 10 MONTHS \$52,234

#### HAMPTON INSTITUTE

FIELDS, VICTOR H; SUMMER INSTITUTE IN CHEMISTRY, MATHEWATICS, AND PHYSICS FOR SECONDARY SCHOOL TEACHERS (Woods71): 10 MONTHS \$49,859

FIELDS, VICTOR H: IN SERVICE INSTITUTE IN SCIENCE AND WATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007478); 19 MONTHS BLOST

#### NORFOLK STATE COLLEGE

BROWN, PAUL L; SUMMER INSTITUTE IN BIOLOGY FOR SECONDARY SCHOOL TEACHERS (W007013); 10 MONTHS \$49,104

#### OLD DOMINION UNIVERSITY

MARSHALL, HAROLD G; SUMMER INSTITUTE IN BIOLOGY FOR SECONDARY SCHOOL TRACHERS (W007000); 10 MONTHS \$32692

KERNELL, ROBERT L; IN-SERVICE INSTITUTE IN INTERPISCIPLINA-RY PHYSICAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOO7553); 19 MONTHS \$13,517

#### RANDOLPH-MACON WOMANOS COLLEGE

WHIDDEN, HELEN L; SUMMER INSTITUTE FOR SECONDARY SCHOOL FEACHERS (W006987): 41 MONTHS 864.541

#### UNIVERSITY OF VIRGINIA

THOMPSON, ERTLE; SUMMER INSTITUTE IN SCIENCE FOR SECON-

DARY SCHOOL TEACHERS (WOOTOII); 10 MONTHS \$35,135

THOMPSON, ERTLE; ACADEMIC YEAR INSTITUTE IN SCIENCE IEMPHASIS ON TRAINING SCIENCE SUPERVISORS AND COORDINA-FORS) FOR SECONDARY SCHOOL TEACHERS (W007030); 24 MONTHS 1128,179

THOMPSON, ERTLE; IN-SERVICE INSTITUTE IN SCIENCE AND MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007170); 19 MONTHS 251.126

#### **VIRGINIA STATE COLLEGE**

DUNN, RICHARD H; COMPREHENSIVE PROJECT IN BIOLOGY AND EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (W007313); 28 MONTHS 2893-760

#### WASHINGTON

### FORT WRIGHT COLLEGE OF THE HOLY NAMES

GAUTEREAUX, SR IONE; IN-SERVICE INSTITUTE IN SCIENCE AND MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOO/JJJ); 19 MONTHS \$16929

GAUTEREAUX, IONE: 1973-74 IN-SERVICE INSTITUTE IN SCIENCE AND MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007639); 25 MONTHS \$17,964

### PACIFIC LUTHERAN UNIVERSITY

HERZOG, JOHN O; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOO7J41); 19 MONTHS \$14,012

### SEATTLE UNIVERSITY

COWGILL, REV JAMES J; SUMMER INSTITUTE IN MATHEMATICS AND SCIENCE FOR SECONDARY SCHOOL TEACHERS (W006870); 10 MONTHS 869.947

#### UNIVERSITY OF WASHINGTON

FLEMING, RICHARD H; SUMMER INSTITUTE IN EARTH SCIENCES FOR SECONDARY SCHOOL TEACHERS (WOO6914); 10 MONTHS \$46,949

ARONS, ARNOLD; SUMMER INSTITUTE IN PHYSICS FOR SECONDARY SCHOOL TEACHERS (W007013): 19 MONTHS \$69,080

STOEBE, THOMAS G; IN-SERVICE INSTITUTE IN MATERIALS SCIENCE FOR SECONDARY SCHOOL TEACHERS (W007482); 19 MONTHS \$11.084

#### WASHINGTON STATE UNIVERSITY

LONG, CALVIN T; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (Woods93); 10 MONTHS \$43,720

BATEY IR, HARRY H; SUMMER INSTITUTE IN SCIENCE FOR SECON-DARY SCHOOL TEACHERS (WOODSIS); 10 MONTHS \$91,440

WISER, H C; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOO6932): 10 MONTHS \$39,475

WISER, H C; 1973 SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOTBJ); 15 MONTHS \$26,555

### WESTERN WASHINGTON STATE COLLEGE

CRASWELL, KEITH J; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOGNED); 10 MONTHS \$20,206

GELDER, HARVEY M; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOO7198); 10 MONTHS \$43,918

CHRISTMAN, ROBERT A; SUMMER INSTITUTE IN EARTH SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOZAIT); 10 MONTHS \$48,811

### WEST VIRGINIA

#### BETHANY COLLEGE

SPENCE, JOHN A; SUMMER INSTITUTE IN PHYSICAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (WOOSIGN: 10 MONTHS \$41,198

#### WEST VIRGINIA UNIVERSITY

JOHNSON, ALONZO F; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007008); 10 MONTHS \$51,609

PETERS, I DEE: IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (WOOTSE); 19 MONTHS \$33,733

#### WISCONSIN

### MARQUETTE UNIVERSITY

CONNELLAN, MIRIAM E; SUMMER INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W006852); 10 WONTHS \$40,763

#### MILWAUKEB AYRA TECHNICAL COLLEGE

MCHALE, THOMAS J; IN-SERVICE INSTITUTE IN TECHNICAL MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007431); 19 MONTHS 46,536

### RIPON COLLEGE

CARLEY, DAVID W; SUMMER INSTITUTE IN CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (WOOGSS); 10 Y'NTHS \$37,846

#### UNIVERSITY OF WISCONSIN, GREEN BAY

BUSCH, JAMES W; IN-SERVICE INSTITUTE IN ENGINEERING CON-CEPTS CURRICULUM PROJECT FOR SECONDARY TEACHERS (W007461); 19 MONTHS \$7,752

#### UNIVERSITY OF WISCONSIN, MADISON

WUERGER, WILLIAM W; SUMMER INSTITUTE IN ENGINEERING FOR SECONDARY SCHOOL TEACHERS (W007026); 10 MONTHS \$58,645

HARVEY, JOHN G; ACADEMIC YEAR INSTITUTE IN SCIENCE AND MATHEMATICS FOR SUPERVISORS AND SECONDARY SCHOOL TEACHERS (WOO7041); 24 MONTHS \$175,862

#### UNIVERSITY OF WISCONSIN, MILWAUKEE

SCHMIEG, GLENN M; SUMMER INSTITUTE IN PHYSICS FOR SECON-DARY SCHOOL TEACHERS (WOGGESS); 10 MONTHS \$47,262

SCHUB, LEON M; SUMMER INSTITUTE IN SOCIAL SCIENCES FOR SECONDARY SCHOOL TEACHERS (W007212); 19 MONTHS \$62,167

### WISCONSIN STATE UNIVERSITY SYSTEM OFFICE

FAY, MARCUS J; SUMMER INSTITUTE IN FIELD BIOLOGY AND ECOLOGY FOR SECONDARY SCHOOL TEACHERS (WOOSES); & MONTHS \$60.447

HEATH. ROY E; SUMMER INSTITUTE IN ENVIRONMENTAL ASSESSMENT FOR SECONDARY SCHOOL TEACHERS (W006884); 10 MONTHS \$49,674

### WISCONSIN STATE UNIVERSITY, EAU CLAIRE

WICK, MARSHALL E; IN-SERVICE INSTITUTE IN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS (W007472); 19 MONTHS \$10,522

#### WISCONSIN STATE UNIVERSITY, RIVER FALLS

DOLLAHON, JAMES C; SUMMER INSTITUTE IN ENVIRONMENTAL-SCIENCE FOR SECONDARY SCHOOL TEACHERS (W008989); 10 MONTHS 432613

HALL, LYLE C; IN-SERVICE INSTITUTE IN CHEMISTRY FOR SECONDARY SCHOOL TEACHERS (W007199); 19 MONTHS \$6,634

### WISCONSIN STATE UNIVERSITY, SUPERIOR

DAILEY, DONALD M; IN-SERVICE SCIENCE EDUCATION IMPLEMENTATION PROJECT FOR TEACHERS (W005866 002); \$8,662

BRIESKE, PHILLIP R; ACADEMIC YEAR INSTITUTE IN PHYSICS AND PHYSICAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (W007046); 24 MONTHS \$69,863

BRIESKE, PHILLIP R; SUMMER INSTITUTE IN MULTIPLE FIELDS FOR SECONDARY SCHOOL TEACHERS (WOOTHER); 10 MONTHS \$100,000

DAILEY, DONALD M; IN-SERVICE INSTITUTE IN ENVIRONMENTAL SCIENCE FOR THE DEVELOPMENT OF SECONDARY SCHOOL RESOURCE PERSONNEL (W007360); 19 MONTHS \$4,704

KOCH, RUDY G; IN-SERVICE INSTITUTE IN ENVIRONMENTAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (W-007428); 19 MONTHS 229 946

BRIESKE, PHILLIP R; IN SERVICE INSTITUTE IN INTERMEDIATE SCIENCE CURRICULUM STUDY (ISCS) FOR SECONDARY SCHOOL TEACHERS (W007450); 19 MONTHS \$31,086

### WISCONSIN STATE UNIVERSITY, WHITEWATER

VARNEY, CHARLES B; SUMMER INSTITUTE IN ENVIRONMENTAL SCIENCE FOR SECONDARY SCHOOL TEACHERS (W007296); 10 MONTHS \$56,631

### WYOMING

#### UNIVERSITY OF WYOMING

HARDING, SAMUEL W; COMPRISHENSIVE PROGRAM TO IMPROVE THE TEACHING OF BIOLOGICAL AND/OR PHYSICAL SCIENCES IN THE



ROCKY MOUNTAIN AND PLAINS STATES (WOODSES OOT); 12 MONTHS SARSTER

### UNDERGRADUATE LEVEL

#### ALABAMA

BIRMINGHAM-SOUTHERN COLLEGE

WAITS, E DOUGLAS; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009156); 24 MONTHS \$2,000

FLORENCE STATE UNIVERSITY

MCINNIS. CHARLES RILEY; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009431); 24 MONTHS \$2,000

UNIVERSITY OF ALABAMA, TUSCALOOSA

ROCERS, DAVID T; SUMMER INSTITUTE ON ENVIRONMENT AND WAN FOR COLLEGE TEACHERS (YOSHIR); 12 MONTHS \$76,980

ROGERS. DAVID T; SUMMER INSTITUTE FOR COLLEGE TEACHERS (YOURSE OOL); \$1,750

DEASON, TEMD R; SHORT COURSE IN EXPERIMENTAL AND EN-VIRONMENTAL PHYCOLOGY FOR COLLEGE TEACHERS (Y009J93); 12 MONTHS \$38,790

DEASON, TEMD R; PHYCOLOGY FOR COLLEGE TEACHERS SHORT COURSE IN EXPERIMENTAL AND ENVIRONMENTAL (Y009193 001); \$1,050

UNIVERSITY OF SOUTH ALABAMA

LELONG. MICHEL GEORGE; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009453): 24 MONTHS \$2,000

#### ARKANSAS

UNIVERSITY OF ARKANSAS-UNIVERSITY OF ARKANSAS AT LITTLE ROCK

PRIOR, RICHARD M; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009495); 24 MONTHS \$2,000

### ADUMESE

BERMUDA BIOLOGICAL STATION FOR RESEARCH INC

LEHMAN, HE; SUMMER INSTITUTE IN MARINE BIOLOGY, DEVELOP-MENTAL PHYSIOLOGY, AND OCEANOGRAPHY FOR COLLEGE TEACHERS (Y009)68); 12 MONTHS \$106,591

#### CALIFORNIA

CALIFORNIA STATE COLLEGE AT DOMINGUEZ HILLS

SEELY, OLIVER; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y000549): 24 MONTHS \$2,000

CALIFORNIA STATE COLLEGE AT SONOMA

SPOSITO, GARRISON; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009540); 24 MONTHS \$2,000

ECK, DAVID L; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009551); 24 MONTHS \$2,000

CALIFORNIA STATE POLYTECHNIC UNIV. POMONA

HSIA, YU-PING; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR. PHASE (1999) \$1): 24 MONTHS \$2,000

CARTMILL, CHARLES EARL; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR. PHASE (Y009541); 24 MONTHS \$2,000

WOOTTON, WILLIAM T; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009547); 24 MONTHS \$2,000

CALIFORNIA STATE UNIVERSITY, CHICO

VOUGHT, ELDON J; RESSARCH PARTN FOR COLLEGE TCHRS-ACAD, YR. PHASE (Y009546); 24 MONTHS \$2,000

CALIFORNIA STATE UNIVERSITY, FULLERTON

JANOTA. HARVEY F; SUMMER INSTITUTE FOR TRAINING TEACHERS OF CHEMICAL TECHNICIANS (Y009384); 12 MONTHS \$120,378 KREINER, JESA H; RESEARCH PARTH FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009345); 24 MONTHS \$2,000

CALIFORNIA STATE UNIVERSITY, HUMBOLDT

ERSKINE, JAHICE MARIE; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y609343); 24 MONTHS \$2,000

CALIFORNIA STATE UNIVERSITY, NORTHRIDGE

GASTON, JACK LEONARD; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y00954J): 24 MONTHS \$2,000

CALIFORNIA STATE UNIVERSITY, SACRAMENTO

NEWCOMB, CHARLES PRESTON; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y0095J9); 24 MONTHS \$2000

CALIFORNIA STATE UNIVERSITY, SAN LUIS OBIS PO

COOMBS, LEE CHARLES: RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009542); 24 MONTHS \$2,000

BUFFA JR. ANTHONY JOHN; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD YR. PHASE (Y009354); 24 MONTHS \$2,000

ENDRES, LELAND 8; RESEARCH PARTN FOR COLLEGE TCHRS-ACA YR. PHASE (Y009333); 24 MONTHS 12,000

MODESTO JUNIOR COLLEGE

GOODROW, MARVIN H; RESEARCH PARTN FOR COLLEGE TCHR ACAD. YR. PHASE (YOSSISO): 24 MONTHS \$2,000

STANFORD UNIVERSITY

MASSELL, BENTON F; SUMMER INSTITUTE IN URBAN ECONOMIC FOR COLLEGE TEACHERS (Y008381); 12 MONTHS \$88,688

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

MEYER, WILLIAM H; SHORT COURSE IN MATHEMATICS FOR COLLEGE TEACHERS (Y009411); 24 JONTHS 462,600

#### COLORADO

COLORADO STATE UNIVERSITY

CERMAK, J E; SUMMER INSTITUTE IN FLUID MECHANICS OF THE ENVIRONMENT FOR COLLEGE TEACHERS (YOOGHIS); 12 MONTHS \$85,165 MCCLELLAN, J FORBES; SUMMER INSTITUTE IN FIELD BIOLOGY FOR COLLEGE TEACHERS (YOOGHIS); 12 MONTHS \$64,339

TEMPLE BUELL COLLEGE

WHITTEMORE, CHARLES ALAN; RESEARCH PARTN FOR COLLEGITCHRS-ACAD. YR. PHASE (YOOSIT); 24 MONTHS \$2,000

UNIVERSITY OF COLORADO

BAILEY, DANIEL E; SUMMER INSTITUTE ON COMPUTER SCIENCI IN SOCIAL AND BEHAVIORAL SCIENCE RESEARCH FOR COLLEGITEACHERS (Y009379); 12 MONTHS \$72,747

IVES, JACK D; SUMMER INSTITUTE IN MOUNTAIN ECOLOGY FO. COLLEGE TEACHERS (Y009J81), 12 MONTHS \$43,889

UNIVERSITY OF DENVER

YEGGE, ROBERT B; SHORT COURSE IN SOCIAL SCIENCE METHODS IN LEGAL EDUCATION FOR COLLEGE TEACHERS (Y009407); 12 MONTHS 467,885

UNIVERSITY OF NORTHERN COLORADO

SCHRECK, JAMES O; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. VR. PHASE (Y009318); 24 MONTHS \$2,000

#### CONNECTICUT

SOUTHERN CONNECTICUT STATE COLLEGE

STEINMETZ JR, CHARLES; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD., YR. PHASE (YOOS 47); 24 MONTHS \$2,000

UNIVERSITY OF BRIDGEPORT

ZANDY, HASSAN F; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (1: 309 \$188); 24 MONTHS \$2,000

WESLEYAN UNIVERSITY

RAMAN, KRISHNAN; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y0094)6); 24 MONTHS \$2,000

## DISTRICT OF COLUMBIA

NONE; OTHER PROGRAM AWARDS (GIAWDS); \$1,018

AMERICAN ASSOCIATION FOR ADVANCEMENT SCIENCE

MAYOR, JOHN R; CHAUTAUQUA-TYPE SHORT COURSES FOR COL-LEGE TEACHERS (Y008301 002); 12 MONTHS \$30,000

CATHOLIC UNIVERSITY OF AMERICA

WALLACE, WILLIAM A; SUMMER INSTITUTE ON THE ROLE OF MATHEMATICS IN THE DEVELOPMENT OF THE SCIENCES FOR COLLEGE TEACHERS (Y008J68); 12 MONTHS \$80,278

MATHEMATICAL ASSOCIATION OF AMERICA

SPENCER, GUILFORD L; SUMMER INSTITUTE IN MATHEMATICS FOR CO! LEGE TEACHERS (Y009367); 12 MONTHS \$76,034

NTL INSTITUTE FOR APPLIED BEHAVIORAL SCIENCE

CALLAHAN, D.G. LAKE & D.M.; TEMPORARY SYSTEMS MANAGEMENT TRAINING AND EVALUATION (WOOGEIG\*); 30 MONTHS \$43,000

#### FLORIDA

CHIPOLAJUNIOR COLLEGE

SIMS, JOYNER; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009497); 24 MONTHS \$2,000

rollins college

SKIDMORE, ALEXANDRA S; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR. PHASE (Y009495): 24 MONTHS \$2,000

UNIVERSITY OF MIAMI

TEAS, HOWARD J; SUMMER INSTITUTE IN TROPICAL BOTANY FOR COLLEGE TEACHERS (Y009376); 12 MONTHS \$59,132



#### GEORGIA

#### AGNES SCOTT COLLEGE

REINHART, PHILIP B; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y000500); 24 MONTHS \$2,000

TURNER, JANICE BUTLER; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y000 198); 24 MO: (THS \$2,000

### MIDDLE GEORGIA COLLEGE

HIEBER, ARLEEN DOROTHEA; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (YOOF LIFE); 24 MONTHS \$2,000

#### HAWAII

## UNIVERSITY OF HAWAII-MAUI COMMUNITY COLLEGE

PALMER, BRUCE; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009519); 24 MONTHS \$2,000

#### IOAHO

#### BOISE STATE COLLEGE

COLBY, CONRAD: RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR, PHASE (Y009554): 24 MONTHS \$2,000

#### **ILLINOIS**

#### COLLEGE OF ST FRANCIS

MILLER, SHARON MONAHAN, RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009502); 24 MONTHS \$2,000

### ILLINOIS INSTITUTE OF TECHNOLOGY

WEINSTOCK, RAROLD, SUMMER INSTITUTE FOR COLLEGE

TEACHERS (Yourst 001), \$894

WEINSTOCK, HAROLD, SUMMER INSTITUTE ON COMPUTER USE IN UNDERGRADUATE PHYSICS INSTRUCTION FOR COLLEGE TEACHERS (Y009374); 12 MONTHS \$79,495

ANAND, EUBHASH C; SUMMER INSTITUTE ON THE DESIGN OF STRUCTURES BY PRACTICING ENGINEERS FOR COLLEGE TEACHERS (Y009375), 12 MONTHS \$48,571

#### NORTHERN ILLINOIS UNIVERSITY

ALBRIGHT, CARL H; SHORT COURSE IN HIGH ENERGY PHYSICS FOR COLLEGE TEACHERS (Y009J99): 12 MONTHS \$25,820

### UNIVERSITY OF ILLINOIS AT CHICAGO CIRCLE

MCCAMMON, RICHARD B; SHORT COURSE IN CURRENT STATISTICAL METHODS IN GEOLOGY FOR COLLEGE TEACHERS (Y009401); 12 MONTHS 128,338

### UNIVERSITY OF ILLINOIS AT URBANA

MALMSTADT, HOWARD V: SHORT COURSE IN DIGITAL AND ANALOG ELECTRONICS FOR COLLEGE TEACHERS (Y009406), 12 MONTHS \$63,214

#### WESTERN ILLINOIS UNIVERSITY

MEIERDING, THOMAS CRAIG; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009501); 24 MONTHS \$2,000

#### INDIANA

#### INDIANA INSTITUTE OF TECHNOLOGY

MIYAKAWA, KOZABURO; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009507); 24 MONTHS \$2,000

#### PURDUE UNIVERSITY

HURST, ROBERT N; SHORT COURSE IN THE AUDIO-TUTORIAL SYSTEM OF INSTRUCTION FOR COLLEGE TEACHERS (Y009404); 12 MONTHS \$48,064

PERONE, SAM P, SHORT COURSE IN DIGITAL COMPUTERS IN CHEMI-CAL INSTRUMENTATION FOR COLLEGE TEACHERS (Y009405); 12 MONTHS \$46,318

#### ROSE-HULMAN INSTITUTE OF TECHNOLOGY

KRILE, THOMAS FRANCIS; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009505); 24 MONTHS \$2,000

MEHALL, ANDREW G; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y00950J), 24 MONTHS \$2,000

#### UNIVARSITY OF EVANSVILLE

KUSHNER, JOSEPH B: RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009504); 24 MONTHS \$2,000

#### WARASH COLLEGE

PARKS, ELDON RDY: RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009506): 24 MONTHS \$2,000

### PURDUE UNIVERSITY-FORT WAYNE REGIONAL CAMPUS

BECKER. BENJAMIN; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009508); 24 MONTHS \$2,000

#### **IOWA**

#### CENTRAL COLLEGE

HOEKSTRA, JOHN J; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009443); 24 MONTHS \$2,000

#### KANSAS

#### KANSAS WESLEYAN

CHIANO, YUAN C; RESEARCH PARTN FOR COLLEGE TCHRS ACAD. YR. PHASE (YOOPLIJ); 24 MONTHS \$2,000

#### KENTUCLY

#### CENTRE COLLEGE OF KENTUCKY

KNOWLES, REX H; RESEARCH PARTN FOR COLLEGE TCHRS ACAD. YR. PHASE (Y009459); 24 MONTHS \$2,000

#### UNIVERSITY OF LOUISVILLS

PIERCE, WILLIAM H; SUMMER INSTITUTE IN BIOMEDICAL EN-GINEERING SCIENCES FOR COILEGE TEACHERS (Y009J70); 12 MONTHS \$78,072

### WESTERN KENTUCKY UNIVERSITY

WAWRUKIEWICZ, ANTHONY S; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009458); 24 MONTHS \$2,000

#### LOUISIANA

### NORTHEAST LOUISIANA UNIVERSITY

GENUSA, VINCENT ANTHONY; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR. PHASE (Y009460); 24 HONTHS \$2,000

#### NORTHWESTERN STATE UNIVERSITY OF LOUISIANA

MCRAE, LARRY GENE; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009181); 24 MONTHS \$2,000

SOUTHERN UNIVERSITY-SOUTHERN UNIVERSITY IN NEW ORLEANS MAJESTE, RICHARD J; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009462); 24 MONTHS \$2,000

#### MARYLAND

### LOYOLA COLLEGE

MACKIW, GEORGE B; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009465); 24 MONTHS \$2,000

### MT ST MARYOS COLLEGE

PALAITIS, WALDEMAR; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009466); 24 MONTHS \$2,000

#### ST JOSEPH COLLEGE

EBY, SR DENISE; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009463); 24 NONTHS \$2,000

## TOWSON STATE COLLEGE

FIGLER, MICHAEL H. RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009467); \$2,000

### UNITED STATES NAVAL ACADEMY

CRUM, LAWRENCE A: SHORT COURSE IN LECTURE DEMONSTRA-TIONS IN PHYSICS FOR COLLEGE TEACHERS (AGOOST); 12 MONTHS \$25,290

### UNIVERSITY OF MARYLAND, EASTERN SHORE

SINGH, GURBAX; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009464); 24 MONTHS \$2,000

### MASSACHUSETTS

## GORDON COLLEGE

CAMP, RUSSELL R; RESEARCH PARTN FOR COLLEGE TCHRS.ACAD. YR. PHASE (Y009124); 24 MONTHS \$2,000

### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

GREEN JR, BEN A; SHORT COURSE IN THE KELLER PLAN FOR COL-LEGE TEACHERS (YOC9388); 12 MONTHS \$20,161

RDUSE JR, RICHARD O; SUMMER INSTITUTE IN EXPERIMENTAL PSYCHOLOGY FOR COLLEGE TEACHERS (Y009136); 12 MONTHS \$68,508

#### MICHIGAN

### ALBION COLLEGE

HOGBERG, DAVID KLAS; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009523); 24 MONTHS \$2,000

#### CENTRAL MICHIGAN UNIVERSITY

HYERS, ALBERT D; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009524), 24 MONTHS \$2,000

### HOPE COLLÈGE

MARKER, DAVID GEORGE; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009521); 24 MONTHS \$2,000



#### SCHOOLCRAPT COLLEGE

ATCHLEY, RALPH W; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD YR. PHASE (Y000515); 24 MONTHS \$2,000

#### ST CLAIR COUNTY COMMUNITY COLLEGE

ANECKI, LEO; RÉSEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR. PHASE (Y009580); 24 MONTHS \$2,000

#### UNIVERSITY OF MICHIGAN

BIDWELL, EDWIN L; SHORT COURSE IN CONSTRUCTION ENGINEER-ING FOR COLLEGE TEACHERS (YOCOLIO); 12 MONTHS \$45,609

#### WESTERN MICHIGAN UNIVERSITY

POWELL, JAMES H; SHORT COURSE IN THE TEACHING OF CALCU-LUS USING COMPUTER METHODS FOR COLLEGE TEACHERS (Y000-100); 12 MONTHS \$47,718

### UNIVERSITY OF MICHIGAN-FLINT COLLEGE

COPE, VIRGIL W; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009548); 24 MONTHS \$2000

#### MINNESOTA

#### COLLEGE OF 8T SCHOLASTICA

SCHROEDER, 8R DONNA; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR, PHASE (Y009119): 24 MONTHS \$2,000

### NORMANDALE STATE JUNIOR COLLEGE

NORLANDER, PAUL CARL; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR. PHASE (Y009140); 24 MONTES \$2,000

#### ST CLOUD STATE COLLEGE

EZELL, WAYLAND LEE; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR. PHASE (YOU) (41); 24 MONTHS \$2,000

#### STOLAF COLLEGE

ROBINSON, DAVID ATHERTON, RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. FHASE (Y000 LP1); 24 MONTHS \$2,000

#### MISSISSIPPI

#### JACKSON STATE COLLEGE

GARRITY, EVELYN M; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009468); 24 MONTHS \$2,000

#### MISSISSIPPI VALLEY STATE COLLEGE

KHAN, SHARIF AHMAD: RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009469); 24 MONTHS \$2,000

#### UNIVERSITY OF MISSISSIPPI

SMITH, CHARLES E; SUMMER INSTITUTE IN NUMERICAL SOLUTION TECHNIQUES IN ELECTROMAGNETIC FIELD THEORY FOR COLLEGE TEACHERS (Y009371); 12 MONTHS \$47.550

#### MISSOURI

#### **COLUMBIA COLLEGE**

GREV, DENNIS M; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009115); 24 MONTHS \$2,000

### DRURY COLLEGE

GREEVER, JOE CARROLL; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009416), 24 MONTHS \$2,000

#### SOUTHEAST MISSOURI STATE COLLEGE

SOELLNER, ARTHUR M; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009418); 24 MONTHS \$2,000

### SOUTHWEST MISSOURI STATE COLLEGE

GRINDSTAFF, WYMAN X; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR. PHASE (Y009417); 24 MONTHS \$2,000

### NEBRASKA

### KEARNEY STATE COLLEGE

KAUFMAN, DONALD ALLEN; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009516); 24 MONTHS \$2,000

#### UNIVERSITY OF NEBRASKA AT LINCOLN

FULLER, ROBERT G; SHORT COURSE IN THE FILM LOOP INSTRUCTIONAL COURSE IN PHYSICS FOR COLLEGE TEACHERS (Y009408); 12 MONTHS \$27,243

### UNIVERSITY OF NEBRASKA AT OMAHA

FREIVALD, JOSEPH A; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009527); 24 MONTHS \$2,000

#### new Hampshire

### UNIVERSITY OF NEW HAMPSHIRE, DURHAM

LYLE. ROBERT E; SHORT COURSE IN SPECTROSCOPIC AND CHROMATOGRAPHIC TECHNIQUES FOR COLLEGE TEACHERS (Y009387); 12 MONTHS \$28,582

#### NEW JEESLY

#### BLOOMFIELD COLLEGE

SIEGEL, MARSHALL M; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR, PHASE (Y00913); 24 MONTHS \$2000

#### NEWARK COLLEGE OF ENGINEERING

TRATTNER, RICHARD, RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR. PHASE (Y009100), 24 MONTHS \$2,000

#### WILLIAM PATERSON COLLEGE

LA, SUNG YUN; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y000138); 24 MONTHS \$2,000

# FAIRLEIGH DICKINSON UNIVERSITY-FLORHAM-MADISON CAMPUS

MULTER, H GRAY, SHORT COURSE IN MODERN CARBONATE SEDI-MENTS AND RELATED CARBONATE ROCKS FOR COLLEGE TEACHERS (Y009192); 12 MONTHS \$25,707

### FAIRLEIGH DICKINSON UNIVERSITY-TEANECK CAMPUS

LIBERLES, ARNO; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009129): 24 MONTHS \$2,000

#### **NEW YORK**

### BARNARD COLLEGE

DEVONS, SAMUEL; SUMMER INSTITUTE IN THE HISTORY OF PHYSICS FOR COLLEGE TEACHERS (YOSSIS); 12 MONTHS \$47,606

#### COLGATE UNIVERSITY

POWNALL, MALCOLM W; SHORT COURSE IN CATEGORY THEORY FOR COLLEGE TEACHERS (Y000190): 12 MONTHS \$39,968

#### COLLEGE AT BROCKPORT

RUMAGE, KENNARD W; SUMMER INSTITUTES ON NEW AP-PROACHES IN GEOGRAPHY FOR COLLEGE TEACHERS (Y009338); 12 MONTHS \$66,390

#### COLLEGE AT FREDONIA

FAHNESTOCK, ROBERT K; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (YOMHA): 24 MONTHS \$2,000

#### COLLEGE AT GENESEO

REBER, JERRY D; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009US); 24 MONTHS \$2,000

### COLLEGE AT OSWEGO

HYDE, KENNETH E; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009188): 24 MONTHS \$2,000

#### COLLEGE AT PLATTSBURGH

LEE, DANIEL C; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y00943); 24 MONTHS \$2,000

LOACH, KENNETH W; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR. PHASE (Y009111); 24 MONTHS \$2,000

MAMMANO, NICHOLAS; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009111); 24 MONTHS \$2,000

#### COLLEGE AT POTSDAM

ALEXANDER, ANNIE LAURER; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR. PHASE (Y009419); 24 MONTHS \$2,000

#### COLUMBIA UNIVERSITY

WOLTJER, LODEWYK, SUMMER INSTITUTE IN ASTRONOMY FOR COLLEGE TEACHERS (Y006381); 12 MONTHS \$62,610

#### CORNELL UNIVERSITY

LUCAS, WILLIAM F; SUMMER INSTITUTE ON DETERMINISTIC METHODS IN OPERATIONS RESEARCH FOR COLLEGE TEACHERS (Y009J59); 12 MONTHS \$75,790

MARDEN, PARKER G; SUMMER INSTITUTE IN SOCIAL DEMOGRAPHY AND POPULATION POLICY FOR COLLEGE TEACHERS (Y009360); 12 MONTHS \$73,803

#### HERKIMER COUNTY COMMUNITY COLLEGE

PELZ, WILLIAM E; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009140); 24 MONTHS \$2,000

### HOUGHTON COLLEGE

CHRISTENSEN, LARRY WAYNE; RESEARCH PARTN FOR COLI-EGE TCHRS-ACAD. YR. PHASE (Y009445); 24 MONTHS \$2,000

#### MARIST COLLEGE

PERROTTE JR, WILLIAM T; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009131); 24 MONTHS \$2,000

#### POLYTECHNIC INSTITUTE OF BROOKLYN

PIEL, E J; SHORT COURSE ON THE ENGINEERING CONCEPTS CUR-RICULUM FOR COLLEGE TEACHERS (Y009391); 12 MONTHS \$49,406

#### PRATT INSTITUTE

PRAKASH, HARI; RESEARCH PARTIN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009410); 24 MONTHS \$2,000



BENGGELAER POLYTECHNIC INSTITUTE

RICHTOL, HERBERT H: SUMMER INSTITUTE IN INSTRUMENTAL METHODS OF ANALYSIS FOR COLLEGE TEACHERS (YEORIGI): 12 MONTHS \$55.948

GROSS, ERIC T B; SHORT COURSE IN EXPERIMENTAL ANALYSES OF ELECTRICAL MACHINES FOR COLLEGE TEACHERS (YOURSE); 12 MONTHS 128.066

ST LAWRENCE UNIVERSITY

KAZAKS, PETER A; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (YOOSHO); 24 MONTHS \$2,000

SUFFORK COUNTY COMMUNITY COLLEGE

RUDDEN, MATTHEW J; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR, PHASE (Y00944); 24 MONTHS \$2,000

UNIVERSITY OF ROCHESTER

DALTON, J CHRISTOPHER; SUMMER INSTITUTE IN ORGANIC PHOTOCHEMISTRY FOR COLLEGE TEACHERS (Y008384); 12 MONTHS MORE

THOMPSON, BRIAN 3; SHORT COURSE IN CONTEMPORARY OPTICS FOR COLLEGE TEACHERS (Y009J89); 13 MONTHS \$29,056

UTICA COLLEGE

PRATT, THOMAS EDWARD; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009147); 24 MONTHS \$2,000

#### **NORTH CAROUNA**

APPALACHIAN STATE UNIVERSITY

SOEDER, ROBERT WALTER: RESEARCH PARTN FOR COLLEGE ICHRS-ACAD. YR. PHASE (Y009474): 24 MONTHS \$2,000

BELMONT ABBEY COLLEGE

CELECIA, JUAN FELIX: RESEARCH PARTN FOR COLLEGE TCHRS. ACAD. YR. PHASE (Y009178): 24 MONTHS \$2,000

CAMPBELL COLLEGE

BURNSIDE, DALE FREDERICK; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR. PHASE (Y005174); 24 MONTHS \$2,000

LIVINGSTONE COLLEGE

MUNAVALLI, SOMASHEKHAR; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR, PHASE (Y009 (70)) 24 MONTHS \$2,000

LOUISBURG COLLEGE

BURRIS, KENNETH WAYNE; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y00\$171): 24 MONTHS \$2,000

PFBIFFRR COLLEGE

JACKMAN, DONALD COE; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009474); 24 MONTHS \$2,000

REGIONAL ED LAB FOR THE CAROLINAS & VIRGINIA

STRALEY, JOSEPH W; REVITALIZATION OF THE FRESHMAN-SOPHOMORE PHYSICS PROGRAM AT TWENTY COLLEGES (19092)1 002\*); 12 MONTHS \$25,000

UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

WALKER, ROBERT P; SUMMER INSTITUTE IN MATHEMATICS FOR COLLEGE TEACHERS (Y009164); 12 MONTHS \$55,875

WARREN WILSON COLLEGE

COLLINS, DONALD FAIRLEY: RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR. PHASE (Y009473); 24 MONTHS \$2,000

### ОНЮ

BALDWIN-WALLACE COLLEGE

SMITH, CALVIN ALBERT; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR, PHASE (Y009313); 24 MONTHS \$2,000

DENISON UNIVERSITY

KLATT, KENNETH PAUL: RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009811); 24 MONTHS \$2,000

MARY MANSE COLLEGE

SAMPSON, JAMES ROBERT; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR. PHASE (Y009510); 24 MONTHS \$2,000

MOUNT UNION COLLEGE

EPP, LEONARD; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YE. PHASE (Y009512); 24 MONTHS \$2,000

OHIO STATE UNIVERSITY

SCHWIRIAN, KENT P; SHORT COURSE IN MODELS OF URBAN SPA-TIAL ECOLOGY AND POPULATION (Y009J97): 12 MONTHS \$42,979

OHIO UNIVERSITY

OVERBY, CHARLES M; SHORT COURSE ON ENGINEERING AND THE TECHNOLOGICAL SOCIETY FOR COLLEGE TEACHERS (Y009398); 12 MONTHS \$16,554

WRIGHT STATE UNIVERSITY

MALONE, PHILIP GARCIN: RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR. PHASE (Y009309); 24 MONTHS \$2,000

#### OKLAN'OMA

BETHANY-NAZARPNE COLLEGE

REINBOLD, PAUL EARL; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y008588); 24 MONTHS \$2,000

NORTHWESTORN STATE COLLEGE

ROGERS, STEARNS WALTER; RESEARCH PAR'N FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y0085)0); 24 MONTHS \$2,000

ORAL ROBERTS UNIVERSITY

MAY, HUBERT EUGENE; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009541); 24 MONTHS \$2,000

SOUTHWESTERN STATE COLLEGE

JONES, RAY CHRISTENSEN; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR. PHASE (Y009519); 24 MONTHS \$2,000 WOLGANOTT, GARY DEAN, PRESEARCH PARTY, SAR COLLEGE

WOLGAMOTT, GARY DEAN; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR. PHASE (Y009534); 24 MONTHS \$2 000

#### OREGON

OREGON STATE UNIVERSITY

JENSEN, J GRANVILLE; SUMMER INSTITUTE IN SYSTEMS ANALYSIS OF LAND USE PROBLEMS FOR COLLEGE TEACHERS (Y000180); 12 MONTHS \$35,179

WILLAMETTE UNIVERSITY

THORSETT, GRANT, RESEARCH PARTN FOR COLLEGE TCHRS.ACAD. YR. PHASE (Y009533), 24 MONTHS \$2,000

#### PENNSYLVANIA

**BUCKNELL UNIVERSITY** 

ALLEN, JOHN C; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (YOSQLAS); 24 MONTHS \$2,000

DUQUESNE UNIVERSITY

CHANG, SHIH-CHI; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009477); 24 MONTHS \$2,000

Edinboro State Coll 2G8

WAGNER, DAVID L; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009481); 24 MONTHS \$2,000

KEYSTONE JUNIOR COLLEGE

JOSEPH, ERAT S; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009176); 24 MONTHS \$2,000

LAFAYETTE COLLEGE

JAMES JR, LAYLIN K; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009178); 24 MONTHS \$2,000

MILLERSVILLE STATE COLLEGE

PARKS, JAMES C: RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (YOU9180); 24 MONTHS \$2,000

PENNSYLVANIA STATE UNIVERSITY

MCCARTHY, GREGORY J; SUMMER INSTITUTE IN SOLID STATE AND MATERIALS CHEMISTRY FOR COLLEGE TEACHERS (Y009J7J): 12 MONTHS \$62,167

DAS, MUKUNDA B; SHORT COURSE IN FOUNDATIONS OF IN-TEGRATED CIRCUITS FOR COLLEGE TEACHERS (Y009196); 12 MONTHS \$45,046

THIEL COLLEGE

NEWTON, MERVIN E; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009481): 24 MONTHS \$2,000

WAYNESBURG COLLEGE

THAN, AUNG; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y00941); 24 MONTHS \$2,000

### RHODE ISLAND

BROWN UNIVERSITY

SCHUPACK, MARK B; SUMMER INSTITUTE ON APPLICATIONS OF MICRO-ECONOMIC THEORY TO PUBLIC POLICY PROBLEMS FOR COLLEGE TEACHERS (Y00915T); 12 MONTHS \$60,394

#### **SOUTH CAROLINA**

ALLEN UNIVERSITY

SINGH, PIARA; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009188); 24 MONTHS \$2,000

SOUTH CAROLINA STATE COLLEGE

CLARK, CARL OLIVER; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009 187); 24 MONTHS \$2,000

UNIVERSITY OF SOUTH CAROLINA

DURIG, JAMES R; SUMMER INSTITUTE ON ELECTRICAL AND MAGNETIC PHENOMENA OF INORGANIC MATERIALS FOR COLLEGE TEACHERS (Y009)65); 12 MONTHS \$50,908

POOLE JR, CHARLES P; SHORT COURSE IN ELECTRON SPIN RESONANCE FOR COLLEGE TEACHERS (Y009391); 12 MONTHS 128,702



VOORHEES COLLEGE

VOLZ, DONALD J; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y005)833; 24 MONTHS \$2,000

UNIVERSITY OF SOUTH CAROLINA-UNION CAMPUS

WANG, JIR-MING: RESEARCH PARTN FOR COLLEGE TCHRS ACAD. YR. PHASE (Y009138); 24 MONTHS \$2,000

### SOUTH DAKOTA

AUGUSTANA COLLEGE

WEITZE, CHARLES EARL; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y00934); 24 MONTHS \$2,000

HADWIN, DONALD W; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR, PHASE (Y008536); 24 MONTHS 42,000

SOUTH DAKOTA SCHOOL OF MINES AND TECHNOLOGY

DOORNINK, DEAN GRAHAM, RESEARCH PARTN FOR COLLEGE TCHRS.ACAD. YR. PHASE (Y009333); 24 MONTHS \$2,000

#### TENNESSEE

SOUTHWESTERN AT MEMPHIS

TAYLOR, J H; SHORT COURSE IN OPTICS FOR COLLEGE TEACHERS (Y009400): 12 MONTHS \$12.592

TENNESSEE TECHNOLOGICAL UNIVERSITY

HARRIS, JOHN W; RESEARCH PARTN FOR COLLEGE TCHRS ACAD. YR. PHASE (Y009314); 24 MONTHS \$2,000

ATKINSON, DANIEL A; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR. PHASE (Y009516); 24 MONTHS \$2,000

TUSCULUM COLLEGE

SHEN, MUNG-LIANG; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009515); 24 MONTHS 42,000

UNIVERSITY OF TENNESSEE, KNOXVILLE

PETERSEN, RONALD H; SHORT COURSE ON THE ROLE OF BASIDIO-MYCETES IN THE FOREST ECOSYSTEM FOR COLLEGE TEACHERS (Y009102); 12 MONTHS \$30,330

VANDERBILT UNIVERSITY

BOGITSH, BURTON J. SHORT COURSE IN HISTOCHEMISTRY FOR COL-LEGE TEACHERS (1908)(01); 12 MONTHS 125/237

#### TEXAS

ABILENE CHRISTIAN COLLEGE

HUTCHINSON, BENNETT: RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR. PHASE (Yoosssa); 24 MONTHS \$2,000

MIDWESTERN UNIVERSITY

HOLVERSON, EDWIN L: RESEARCH PARTN FOR COLLEGE TCHRS. ACAD. YR. PHASE (Y009358), 24 MONTHS \$2,000

PAN AMERICAN UNIVERSITY

WALLACE, CHARLES RAY; RESEARCH PARTN FOR COLLEGE TCHRS. ACAD. YR. PHASE (Y009347), 24 MONTHS \$2,000

RICE UNIVERSITY

THRALL, ROBERT M; SUMMER INSTITUTE IN MODEL BUILDING AND STATISTICS FOR COLLEGE TEACHERS (Y009J86); 12 MONTHS \$62.253

HIGHTOWER, JOE W; SHORT COURSE IN PRINCIPLES OF HETEROGENEOUS CATALYSIS FOR COLLEGE TEACHERS (Y009414); 12 MONTHS \$35,034

TEXAS SOUTHMOST COLLEGE

SULLIVAN, JAMES RODNEY; RESEARCH PARTN FOR COLLEGE TCHRS.ACAD. YR. PHASE (Y009358); 24 MONTHS \$2,000

UNIV OF TEXAS AT AUSTIN

MATSEN, F A: SHORT COURSE IN THE VECTOR SPACE THEORY OF MATTER FOR COLLEGE TEACHERS (Y009411): 12 MONTHS \$41,364

UNIVERSITY OF HOUSTON

MAHONEY, LEO G; IMPROVEMENT OF SCIENCE EDUCATION FOR BLACK AND LATIN-AMERICAN COLLEGE TEACHERS (Y009413); 12 MONTHS \$29,815

WAYLAND BAPTIST COLLEGE

THOMPSON, GERALD: RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009555): 24 MONTHS \$2,000

### HATU

UTAH STATE UNIVERSITY

SMERAGE, GLEN H; SUMMER INSTITUTE IN SYSTEMS APPROACH TO THE LIFE SCIENCES FOR COLLEGE TEACHERS (Y009/32); 12 MONTHS \$78,658

### VERMONT

UNIVERSITY OF VERMONT

MYERS, CHARLES C; SYMPOSIUM ON FOREST BIOMETRY (Y009JJ4); 5 MONTHS \$2,000

#### VIRGINIA

HAMPDEN SYDNEY COLLEGE

PORTERFIELD, WILLIAM W. RESEARCH PARTN FOR COLLEGE TCHRS ACAD. YR. PHASE (Y008190), 24 MONTHS \$2,000

WASHINGTON AND LEE UNIVERSITY

NEWBOLT, WILLIAM BARLOW, RESEARCH PARTN FOR COLLEGE TCHRS. ACAD. YR. PHASE (Y90343); 24 MONTHS \$2,000

#### WASHINGTON

GONZAGA UNIVERSITY

NAKAMAYE, KAY LEE; RESEARCH PARTN FOR COLLEGE TCHRS. ACAD. YR. PHASE (Y009538); 24 MONTHS \$2000

WASHINGTON STATE UNIVERSITY

BUSH, K A; SUMMER INSTITUTE ON MATHEMATICAL APPROACHES TO ECONOMIC PROBLEMS FOR COLLEGE TEACHERS (Y009377); 12 MONTHS \$78,028

WHITMAN COLLEGE

TEMPLETON, J CHARLES; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR. PHASE (Y0093JT); 24 MONTHS \$2,000

#### WEST VIRGINIA

CONCORD COLLEGE

CHAPMAN, CARL J, RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009194); 24 MONTHS \$2,000

WEST VIRGINIA INSTITUTE OF TECHNOLOGY

MOULDER, JERRY W; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y008191); 24 MONTHS \$2,000 PAINTAL, AMREEK; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD.

YR. PHASE (Y00949J); 24 MONTHS \$2,000

WEST VIRGINIA STATE COLLEGE

PAVLOS, ANDREW JOHN; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y008191): 24 MONTHS \$2,000

#### WISCONSIN

MILWAUKEE SCHOOL OF ENGINEERING

KOBISKE, RONALD A; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD YR PHASE (Y009154); 24 MONTHS \$2,000

NORTHLAND COLLEGE

HAUKAAS, HARVEY B; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR. PHASE (Y00944); 24 MONTHS \$2,000

WISCONSIN STATE UNIVERSITY, PLATTEVILLE

OBRIEN, JOHN T; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009454); 24 MONTHS \$2,000

WISCONSIN STATE UNIVERSITY, STEVENS POINT

RAZDAN, KAMESHWAR N; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR. PHASE (Y009141); 24 MONTHS \$2,000

LANO, CONRAD MARVIN; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009132); 24 MONTHS \$2,000

WISCONSIN STATE UNIVERSITY, WHITEWATER

SHINNERS, CARL WILLIAM: RESEARCH PARTH FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009450), 24 MONTHS \$2,000

LETTENBERGER, ROBERT; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD, YR. PHASE (Y009451); 24 MONTHS \$2,000

UNIVERSITY OF WISCONSIN CENTERS-SHEBOYGAN COUNTY CAMPUS PENESKI, THOMAS J; RESEARCH PARTN FOR COLLEGE TCHRS-ACAD. YR. PHASE (Y009149); 24 MONTHS \$2,000

# INSTRUCTIONAL PROGRAM DEVELOPMENT

## PRE-COLLEGE LEVEL

### ALABAMA

SPRING HILL COLLEGE

KEARLEY JR, FRANCIS J; COOPERATIVE COLLEGE SCHOOL SCIENCE (WOO7166); 19 MONTHS \$39,358

UNIVERSITY OF ALABAMA IN BIRMINGHAM

PEARSON, COLIN A: COOPERATIVE COLLEGE SCHOOL SCIENCE (WOO7165); 19 MONTHS \$21.782

#### ARIZONA

ARIZONA STATE UNIVERSITY

MUNCH, T W; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007071); 19 MONTHS \$33,653

STALEY, FREDERICK A; COOPERATIVE COLLEGE SCHOOL SCIENCE (WOOTORS); 20 MONTHS \$25,197



STADMILLER, J E; ARIZONA THE MAN-MADE WORLD INFORMATION AWARENESS CONFERENCES (WOOTLIN: 18 MONTHS \$9,800

#### ARKANSAS

#### SOUTHERN STATE COLLEGE

DODSON, B C; COOPERATIVE COLLEGE SCHOOL SCIENCE (WOOTIGE);

#### UNIVERSITY OF ARKANSAS

ANDERSON, RICHARD J; COOPERATIVE COLLEGE SCHOOL SCIENCE (WOOTIED), 19 MONTHS 129,340

#### CALIFORNIA

#### ARIA POUNDATION

SCHWANTES, ROBERT S; TRAVEL OF ASIAN PARTICIPANTS TO NSF SUPPLEMENTARY TRAINING PROGRAMS (WOGJO90 004); 12 MONTHS \$11,200

### CALIFORNIA COMMITTEE ON REGIONAL MEDICAL PROG

HUGHES, LEONARD A; THE BIOMEDICAL INTERDISCIPLINARY CUR-RICULUM PROJECT (WOOSSIS): 21 MONTHS \$125.000

### CALIFORNIA STATE COLLEGE AT RAKERSFIELD

COASH, JOHN R: COOPERATIVE COLLEGE SCHOOL SCIENCE

### CALIFORNIA STATE COLLEGE AT SONOMA

KIENTZ, MARVIN L; COOPERATIVE COLLEGE SCHOOL SCIENCE (WOODOOD): 19 MONTHS \$26.683

#### CALIFORNIA STATE UNIVERSITY, PRESNO

ZIEGLER, STANLEY M; COOPERATIVE COLLEGE SCHOOL SCIENCE (WOOTOTA); 20 MONTHS \$32,291

### CALIFORNIA STATE UNIVERSITY, FULLERTON

COLLEA, FRANCIS P. COOPERATIVE COLLEGE SCHOOL SCIENCE (W007074), 20 MONTHS \$36,164

LAY, L CLARK; COOPERATIVE COLLEGE SCHOOL SCIENCE (WOOTING); 19 MONTHS \$40,456

### CALIFORNÍA STATE UNIVERSITY, NORTHRIDGE

FIELSTRA, HELEN; COUPERATIVE COLLEGE SCHOOL SCIENCE (WOOTHER); 20 MONTHS \$39,907

### CONTRA COSTA COUNTY DEPARTMENT OF EDUCATION

CASTELLANI, GEORGE J; MARINE ECOLOGY STUDY FOR STUDENTS AND TEACHERS OF ALAMEDA AND CONTRA COSTA COUNTIES (W004717 001): \$6,369

CASTELLANI, GEORGE J; MARINE ECOLOGY ST FOR STUDATEACHERSIALAMEDA&CONTRA COSTA COUNTIES (W008717 002); 16 MONTHS \$92.564

### PALACE OF ARTS AND SCIENCE FOUNDATION

OPFENHEIMER, FRANK; STUDENT SCIENCE PROJECT PROGRAM AT THE EXPLORATORIUM (WOOSESS CO.): 17 MONTHS \$26.41)

OPPENHEIMER, FRANK, DEVICOHERENT SERIPART EXHIBITS F THE PALACEIARTS & SCI EXPLORAT IN S FR (WOOGSIS), 15 MONTHS \$73,200

### UNIVERSITY OF CALIFORNIA, BERKELEY

KARPLUS, ROBERT; SCIENCE CURRICULUM IMPROVEMENT STUDY

ROSENFELD, ARTHUR H, AND SHERMAN, N; COMPUTER BASED SELF-INSTRUCTIONAL COURSE FOR SUPPLEMENTARY TRAINING OF SECONDARY SCHOOL TEACHERS OF PHYSICS (WOOSGE) 23 MONTHS 415.309

PORTIS, ALAN M; CENTER OF EXCELLENCE IN SCIENCE EDUCA-TION (Woodsit 001°): 14 MONTHS \$143,000

LAETSCH, W M; OUTDOOR BIOLOGY-INSTRUCTIONAL STRATEGIES (WOOGHO); 15 MONTHS \$100.0 M

BARANCO, LYNN R; COOPERATIVE COLLEGE-SCHOOL SCIENCE PRO-GRAM (WOOTIOO); 20 MONTHS \$61,747

HENKIN, LEON; COOPERATIVE COLLEGE SCHOOL SCIENCE (WOOTHS); 20 MONTHS \$61,60

LOWERY, LAWRENCE F; CONFERENCE ON SCIENCE PROJECTS FOR ADMINISTRATORS AND SUPERVISORS OF ELEMENTARY EDUCATION SCIS, ESS, SAPA, ES, MACOS (WOO7438); 18 MONTHS \$16,000

### UNIVERSITY OF CALIFORNIA, DAVIS

FRENCH, JEAN G: THE BIOMEDICAL INTERDISCIPLINARY CURRICU-LUM PROJECT (W004801); 9 MONTHS \$50,000

FRENCH, JEAN; THE BIOMEDICAL INTERDISCIPLINARY CURRICU-LUM PROJECT (W006801 001); 12 MONTHS \$46,100

### UNIVERSITY OF CALIFORNIA, IRVINE

LENHOFF, HOWARD M; COOPERATIVE COLLEGE SCHOOL SCIENCE (WOOTEST); 20 MONTHS \$17,475

#### UNIVERSITY OF REDLANDS

KRANTZ. REINHOLD J; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007111); 19 MONTHS \$18,004

### UNIVERSITY OF SOUTHERN CALIFORNIA

WHITE, PAUL A; COOPERATIVE COLLEGE SCHOOL SCIENCE (WOOTER); 20 MONTHS \$39.579

#### COLORADO

NONE; OTHER PROGRAM AWARDS (GIAWDS); \$4

#### SOCIAL SCIENCE EDUCATION CONSORTIUM INC

MORRISSETT, IRVING: IMPROVEMENT, ANALYSIS AND USE OF SO-CIAL SCIENCE CURRICULUM MATERIALS, K-12 (WOOR277 COS); 2 MONTHS 15,800

MORRISSETT, IRVING; IMPROVEMENT, ANALYSIS, AND USE OF SO-CIAL SCIENCE CURRICULUM MATERIALS, K-18 (WOOR477 004\*); 30 MONTHS \$174.604

### UNIVERSITY OF COLURADO

FENG, CHUAN C: COOPERATIVE COLLEGE SCHOOL SCIENCE (W007091): 21 MONTHS \$39.535

WAILES, JAMES R; SUMMER CONF CONCERNING NEW SCI CURRICU-LA FOR DIR I ELEMENTARY EDUCATION (WOOTSS); 18 MONTHS \$13,552 FENG, CHUAN C; LEADERSHIP PREP F IMPLEMENTATIONICOMPUT-ING SCIENCE ALO IIITRIG COURSE (WOOTSS); 18 MONTHS \$42,500

COUSINS, JACK, AND STEVENS, N W JR; LEADERSHIP PREPARATION FOR IMPLEMENTATION OF SOCIAL STUDIES CURRICULA (W007263); 18 MONTHS \$57.300

WAILES, JAMES R; SHORT COURSE ON NATIONAL CURRICULAR STU-DIES FOR SCIENCE SUPERVISORS AND COLLEGE PERSONNEL (WOOTHOUT: 10 MONTHS \$3,120

#### UNIVERSITY OF DENVER

HOFFMAN, RUTH: LEADERSHIP PREP F IMPLEMENTATION OF ENG CONCEPTS CURRICULUM PROJECT (W007270); 18 140NTHS \$40,300

AMME, ROBERT C; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007889): 19 MONTHS \$31.764

#### UNIVERSITY OF COLORADO-COLORADO SPRINGS CENTER

SHERMAN, JACK E; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007135); 18 MONTHS \$16,426

#### UNIVERSITY OF COLORADO-DENVER CENTER

MCCLATHERY, GLENN; LEADERSHIP PREP F IMPLEMENTATIONISCI CURRICULUM IMPROVEMENT STUDY (WOOTETS); 18 MONTHS \$42,800

#### CONNECTICUT

# CENTRAL CONNECTICUT STATE COLLEGE

GOODSTEIN, MADELINE P; COOPERATIVE COLLEGE SCHOOL SCIENCE (WO01157); 19 MONTHS \$27,362

GOODSTEIN, MADELINE P; COOPERATIVE COLLEGE SCHOOL SCIENCE PROGRAM (Woot157 001); \$2,646

MENTZER, RICHARD L; LEADERSHIP PREPARATION FOR IMPLE-MENTATION OF THE UICSM PROJECT FOR UNDERACHIEVERS IN MATHEMATICS (W007258); 18 MONTHS \$28,100

### UNIVERSITY OF CONNECTICUT

DUDA, EDWARD J; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007140): 20 MONTHS \$32.594

### DISTRICT OF COLUMBIA

### NONE; OTHER PROGRAM AWARDS (09AWDS); \$13,523

### AMERICAN ASSOCIATION FOR ADVANCEMENT SCIENCE

MAYOR, JOHN R; COMMISSION ON SCIENCE EDUCATION (G022286 015); 18 MONTHS \$215,400

#### AMERICAN FRIENDS OF THE MIDDLE EAST INC

CRIPPIN. VIRGIL C; TRAVIMID EASTERN PARTICIPANTS TO NSF SUPPLEMENTARY TRAINING PROGRAMS (WOOSSES 002); 12 MONTHS \$1.500

## AMERICAN GEOLOGICAL INSTITUTE

RONEY, WILLIAM D, AND SAMPLES, ROBERT E; ENVIRONMENTAL STUDIES FOR URBAN YOUTH (W005387 005); \$5,000

SAMPLES, ROBERT; LEADERSHIP PREP F IMPLEMENTATIONITHE ENVIRONMENTAL STUDIES PROJECT (W007464); 18 MONTHS \$31,900

### AMERICAN POLITICAL SCIENCE ASSOCIATION

MEHLINGER, HOWARD D; POLIT SCI COURSE CONT IMPROVEMENT PROJ FOR ELEM & SECONDARY SCHOOLS (WOOSSIO); 12 MONTHS \$193,100

#### AMERICAN UNIVERSITY

SCHUBERT, LEO; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007070); 19 MONTHS \$11,818

## ASSOC FOR SUPERVISON & CURRICULUM DEVELOPMENT

WILHELMS, FRED T; LDERSHP PREP F IMPLEMTIMAN CRSE/ST W ADDED REFER TO OTH NSF-SPONS CUR (W007244); 18 MONTHS \$13,200



#### **EXOTECH SYSTEMS INC**

EHRMAN, LIBERT; DATA PROCESSING AND TABULATION OF STU-DENT PARTICIPANT DATA FUR 1971 AND 1971 SSTP PROGRAM (CLISO19 03); 5 MONTHS 84.493

#### NATIONAL SCIENCE TEACHERS ASSOCIATION

KIZER, FRANKLIN D; SEVEN REGIONAL CONFERENCES ON SCIENCE EDUCATION IN THE ELEMENTARY AND SECONDARY SCHOOLS OF THE NATION (WOOGSOP\*); 12 MONTHS \$5,400

#### NTL INSTITUTS FOR APPLIED BEHAVIORAL SCIENCE

CALLAHAN, D. G. LAKE & D. M.; TEMPORARY SYSTEMS MANAGEMENT TRAINING AND EVALUATION (WOOSSIG\*); 30 MONTHS \$55,000

### ORGANIZATION OF AMERICAN STATES/PAN AMER UNION

PERKINSON, JESSE D; TRAVELILATIN AMER PARTICIPANTS TO SUP-PLEMENTARY TRAINING PROGRAMS (WOOJOSS 004); 12 MONTHS \$1,900 SMITHSONIAN INSTITUTION

MARSH, CARYL A: EXPERIMENTAL TOUCH EXHIBIT-NATIONAL MUSEUM OF NATURAL HISTORY (Wooled); 12 MONTHS \$50,000

#### FLORIGA

#### FLORIDA STATE UNIVERSITY

REDFIELD, DAVID D, AND SNYDER, WILLIAM R; INTERMEDIATE SCIENCE CURRICULUM STUDY (WOOD) 304); 12 MONTHS \$130,000

CLARK, LAWRENCE; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007137), 19 MONTHS \$41,713

#### FLORIDA TECHNOLOGICAL UNIVERSITY

BRENNAN, J J; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007104); 19 MONTHS \$31,649

#### UNIVERSITY OF SOUTH FLORIDA

MONLEY, LAURENCE E; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007069), 19 MONTHS \$27,891

KOPP, E W; COOPERATIVE COLLEGE SCHOOL SCIENCE (Woozist); 19 MONTHS \$43.458

BULLOCK, JOHN T; LEADERSHIP PREP F IMPLEMENTATION OF SCI CURRICULUM IMPROVEMENT STUDY (WOOTZLE); 18 MONTHS \$13,300 KOPP, E W; LEADERSHIP PREP F IMPLEMENTATION OF ENG CON-CEPTS CURRICULUM PROJECT (WOOTZES); 18 MONTHS \$60,400

#### GEORGIA

#### EMORY UNIVERSITY

SIMMONS, JAMES W: COOPERATIVE COLLEGE SCHOOL SCIENCE (W007/64); 19 MONTHS \$24,280

#### GEORGIA STATE UNIVERSITY

RIEDESEL, C ALAN; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007/J8); 18 MONTHS \$34,145

### SAVANNAH STATE COLLEGE

TUCKER, WILLIE G: COOPERATIVE COLLEGE SCHOOL SCIENCE (W007171); 19 MONTHS \$11,544

### UNIVERSITY OF GEORGIA

RICKER, KENNETH S; COOPERATIVE COLLEGE SCHOOL SCIENCE (W0071J3), 20 MONTHS \$31,010

#### HAWAR

### UNIVERSITY OF HAWAII

CARR, ALBERT B; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007/69); 19 MONTHS \$21,579

LANG, MELVIN; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007190); 19 MONTHS \$35,836

### IDAHO

### UNIVERSITY OF IDAHO

RIGAS, A L: COOPERATIVE COLLEGE SCHOOL SCIENCE (WOOTOSU); 19 MONTHS \$39,465

GARRARD, VERL G; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007089); 14 MONTHS \$39,456

#### ILLINOIS

#### **AURORA COLLEGE**

RICHARDSON, LLOYD M; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007111); 19 MONTHS \$22,421

RICHARDSON, LLOYD M: COOP COLLEGE SCH SCIENCE FROG (W007141 001); \$1,056

### CHICAGO STATE COLLEGE

CHOOS, RAMONA G: COOPERATIVE COLLEGE SCHOOL SCIENCE (W007285); 20 MONTHS \$43,129

### ILLINOIS INSTITUTE OF TECHNOLOGY

SCHUG, KENNETH; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007094); 19 MONTHS \$32,677

#### ILLINOIS STATE UNIVERSITY

EDWARDS, THOMAS F: COOPERATIVE COLLEGE SCHOOL SCIENCE (WOO7174), 19 MONTHS \$42,531

#### NORTHERN ILLINOIS UNIVERSITY

WEAVER, ALLEN D; COOPERATIVE COLLEGE SCHOOL SCIENCE (W097096); 17 MONTHS \$37,766

### UNIVERSITY OF ILLINOIS AT URBANA

ZWOYER, RUSSELL: NINTH GRADE MATHEMATICS COURSE (WOO4547 001); 14 MONTHS \$22,800

SHORESMAN, PETER B; UICSM PROJECT ON ELEMENTARY SCHOOL MATHEMATICS AND SCIENCE (WOO4534 002); 15 MONTHS \$141,300

SHORESMAN, PETER B; ELEMENTARY SCHOOL MATHEMATICS AND SCIENCE (WOOLS 2001); 12 MONTHS \$51,800

#### INDIANA

#### BALL STATE UNIVERSITY

MCCORMICK, ROY L: COOPERATIVE COLLEGE SCHOOL SCIENCE (W007284); 18 MONTHS \$17,836

#### INDIANA STATE UNIVERSITY

BRUCE, LARRY; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007118), 20 MONTHS \$47,530

### INDIANA UNIVERSITY, BLOOMINGTON

HANVEY, ROBERT G; ANTHROPOLOGY CASE MATERIALS PROJECT (W005059 001); 31 MONTHS \$47,000

HARRIS, PHILLIP L; THE ADAPTATION OF PROGRAMED TUTORING TO BEGINNING MATHEMATICS (WOOSTII 001); \$33,400

ENGLE, SHIRLEY H; ORIENTATION CONF ON THE SOC STUD F CUR-RICULUM DIR SUPERVISORS & PRIN (W007417); 18 MONTHS \$19,888

#### INDIANA UNIVERSITY, INDIANAPOLIS

ALTON, ELAINE V; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007117): 19 MONTHS \$64,817

#### PURDUE UNIVERSITY

KROCKOVER, GERALD H; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007150), 19 MONTHS 430,216

NORDLAND, FLOYD H; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007151); 20 MONTHS \$28,145

KROCKOVER, GERALD H; SUMMER CONF FOR ELEMENTARY & MID-DLE SCH ADM ON NEW SCIENCE CURRICULA (WOO7833), 18 MONTHS \$20,493

## PURDUE UNIVERSITY-INDIANAPOLIS REGIONAL CAMPUS

COHEN, MICHAEL R: COOPERATIVE COLLEGE SCHOOL SCIENCE (W007/24); 19 MONTHS \$52,833

### **IOWA**

## DRAKE UNIVERSITY

JOSLIN, PAUL H; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007127): 19 MONTHS \$40,961

### UNIVERSITY OF IOWA

MCADAM, JOHN E; SUMMER CONF F SECONDARY SCH ADM CON-CERNING CURR PROG IN SOCIAL STUD (W00745); 18 MONTHS \$16,620 LOOMER, BRADLEY M; SUMMER CONF FOR ELEMENTARY SCH ADM CONCERNING NEW SCIENCE CURRICULA (V00748); 18 MONTHS \$14,242

#### UNIVERSITY OF NORTHERN IOWA

UNRUH, ROY D; COOFERATIVE COLLEGE SCHOOL SCIENCE (Wootlet); 18 MONTHS \$32,073

### KANSAS

## KANSAS STATE COLLEGE OF PITTSBURG

COLTHARP, FORREST L; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007116): 19 MONTHS \$40,991

### KANSAS STATE TEACHERS COLLEGE OF EMPORIA

MENHUSEN, BERNADETTE; COOPERATIVE COLLEGE SCHOOL SCIENCE (Woo7133), 14 MONTHS \$11,519

#### KENTUCKY

### EASTERN KENTUCKY UNIVERSITY

MAHR, J C; COOPERATIVE COLLEGE SCHOOL SCIENCE (W00717J); 18 MONTHS \$184.578

#### MOREHEAD STATE UNIVERSITY

NAIL, BILLY R; FOL-UP PROG F IMPLEMENTICRSE CONTAPEDAGOG TECH IN UICSM H SCH MATH C 1 (WODZEM); 18 MONTHS \$47,500

#### UNIVERSITY OF KENTUCKY

COLEMAN, DONALD B, COOPERATIVE COLLEGE SCHOOL SCIENCE (W007174); 20 MONTHS \$26,986

#### UNIVERSITY OF LOUISVILLE

GEESLIN, ROGER H; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007168); 19 MONTHS \$16,449



#### WESTERN KENTUCKY UNIVERSITY

SIX. N FRANK; COOPERATIVE COLLEGE SCHOOL SCIENCE (Woorlds); 19 MONTHS 432 281

CRUMB. GLENN H. AND STEVENSON, ROBERT L; LEADERSHIP PREP F IMPLEMENTATION OF SCI CURRICULUM IMPROVEMENT STUDY (W007973); 18 MONTHS \$50,700

#### LOUISIANA

#### GRAMBLING COLLEGE

YOUNG, PHILLIP L; COOPERATIVE COLLEGE SCHOOL SCIENCE (WOODOWLY TO MONTHS \$27.592

#### MCNEESE STATE UNIVERSITY

LEJEUNE, STANLEY J. LEADERSHIP PREP F IMPLEMENTATION/U-ICSM PROG F SLOW LEARNERS AND UNDERACHIEV (W007461): 18 MONTHS 129,000

### NICHOLLS STATE UNIVERSITY

SACHS, JULES B; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007/35); 18 MONTHS \$25.738

## NORTHWESTERN STATE UNIVERSITY OF LOUISIANA

WASKOM, JOHN D. COOPERATIVE COLLEGE SCHOOL SCIENCE (WOOT160); 19 MONTHS \$31,802

### MAINE

#### UNIVERSITY OF MAINE, FARMINGTON

GODOMSKY JR. STEPHEN F; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007033); 19 MONTHS \$37,592

#### MARYLAND

### NONE; OTHER PROGRAM AWARDS (04AWDS); \$4.867

### MORGAN STATE COLLEGE

TAYLOR, JULIUS H; COOPERATIVE COLLEGE SCHOOL SCIENCE (WOODOL); 19 MONTHS \$28,875

#### UNIVERSITY OF MARYLAND, COLLEGE PARK

CRONIN, L EUGENE, AND KORMONDY, EDWARD, FOUR MOTION PIC-TURES IN SOCIAL BIOLOGY (Woosilj 001); \$81,100

GARDNER, MARJORIE; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007099), 20 MONTHS \$38,353

CIRRINCIONE, JOSEPH M; COOPERATIVE COLLEGE SCHOOL SCIENCE (W00770); 20 MONTHS 439:324

#### MASSACHUSETTS

### BOSTON COLLEGE

LADD, GEORGE T; CONFERENCES FOR IMPROVEMENT OF SCI INSTR (W007814), 18 MONTHS \$12,900

### EASTERN NAZARENE COLLEGE

KEHOE, DANIEL K: COOPERATIVE COLLEGE SCHOOL SCIENCE (W007067); 15 MONTHS \$32,455

## EDUCATION DEVELOPMENT CENTER

: LOMON, EARLE L; UNIFIED SCIENCE AND MATHEMATICS FOR ELE-MENTARY SCHOOLS (W005201 002); 5 MONTHS \$25,400

LOMON, E L: UNIFIED SCIENCE & MATHEMATICS FOR ELEMENTA-RY SCHOOLS (W063407 001\*), \$378,239

DEVORE, IRVEN; A SECONDARY SCHOOL COURSE, EXPLORING

HUMAN NATURE (Woodled ool): 18 MONTHS \$125,000

DEVORE, IRVEN; PROPOSAL F A TEACHER EDUCATION PROGRAM F

EXPLORING HUMAN NATURE (WOOSLOG DOU); 12 MONTHS \$227,700 CHURCHILL JR, J M B: ACTIVITIES RELATED TO SCIENCE EDUCA-

## TION (W006898\*); 24 MONTHS \$49,500

#### **NEWTON COLLEGE**

HABER-SCHAIM, URI; COMPLETION OF A SECOND YEAR COURSE TO FOLLOW THE INTRODUCTORY PHYSICAL SCIENCE COURSE (Woosiss on): 7 MONTHS \$17,300

HABER-SCHAIM, URL: COMPLETION OF THE PHYSICAL SCIENCE II IMPLEMENTATION PROGRAM (WOOG:97 001): 6 MONTHS \$5.600

### TUFTS UNIVERSITY

GIBSON, JOHN S; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007095), 19 MONTHS \$27,776

#### WESTFIELD STATE COLLEGE

TAYLOR, J KENNETH; COOPERATIVE COLLEGE SCHOOL SCIENCE (WOO7087); 20 MONTHS \$29,442

#### **MICHIGAN**

### CENTRAL MICHIGAN UNIVERSITY

SWART, WILLIAM L: COOPERATIVE COLLEGE SCHOOL SCIENCE (W007139); 15 MONTHS \$33,486

#### EASTERN MICHIGAN UNIVERSITY

BUCKEYE, DONALD A; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007086), 20 MONTHS \$33,001

### MICHIGAN STATE UNIVERSITY

MCLEOD, RICHIRD J; LEADERSHP PREP F IMPLEMENTATIONIIN. TERMEDIATE SCI CURR STUDY MATERIALS (W007868); 18 MONTHS 860800

BERKHEIMER, GLENN D; LEADERSHP PREP FOR IMPLEMENTA-TIONISCI CURRICULUM IMPROVEMENT ST MTRLS (W007871); 18 MONTHS \$10,300

#### WAYNE STATE UNIVERSITY

YOUKSTETTER. FRANK O; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007079); 20 MONTHS \$60,614

#### WESTERN MICHIGAN UNIVERSITY

MALLINSON, GEORGE G; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007108); 19 MONTHS \$10.744

#### MINNESOTA

### GUSTAVUS ADOLPHUS COLLEGE

HILDING, STEPHEN: COOPERATIVE COLLEGE SCHOOL SCIENCE (W007178); 18 MONTHS \$19.810

### ST CLOU'D STATE COLLEGE

NAPPI, ANDREW T; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007173); 20 MONTHS \$25,368

### UNIVERSITY OF MINNESOTA

KISSOCK, CRAIO, AND WANGEN. ROGER; LEADERSHIP PREPARA-TION FOR IMPLEMENTATION OF ANTHROPOLOGY CURRICULUM STUDY PROJECT, SOCIOLOGICAL RESOURCES FOR THE SOCIAL STU-DIES, AND HIGH SCHOOL GEOGRAPHY PROJECT (WOOTIST); 18 MONTHS 862300

#### MISSISSIPP

### ALCORN AGRICULTURAL AND MECHANICAL COLLEGE

EDNEY, NORRIS ALLEN; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007065); 19 MONTHS \$25,931

### DELTA STATE COLLEGE

HOWELL, DAISY; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007146); 19 MONTHS \$19.512

### MISSISSIPPI VALLEY STATE COLLEGE

FINGAL, WILLIAM A; LEADERSHIP PREP F IMPLEMENTA-TION/ELEM SCI AND MATH CURRICULA MINNEMAST (W007159); 18 MONTHS \$18,400

## UNIVERSITY OF SOUTHERN MISSISSIPPI

BROWN, IVA D; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007085); 13 MONTHS \$25,702

IRBY, B N; LEADERSHIP PREFARATION OF SCHOOL PERSONNEL FOR IMPLEMENTATION OF CURRICULUM DECISIONS (W007241): 18 MONTHS \$11.400

#### MISSOURI

## NORTHWEST MISSOURI STATE COLLEGE

KENNER, MORTON R; COOPERATIVE COLLEGE SCHOOL SCIENCE (Wootlest): 18 MONTHS \$22,819

#### MONTANA

### EASTERN MONTANA COLLEGE

SCHOENTHAL, NORMAN: LEADERSHIP PREPARATION FOR IMPLEMENTATION OF SCIS, AAAS AND ESS, DISSEMINATION WORKSHOP (W007239); 18 MONTHS \$12,500

#### MONTANA STATE UNIVERSITY

KUTZMAN, N J; SCIENCE TEACHING ANSISTANCE CENTER (W007622); 24 MONTHS \$102 900

### NORTHERN MONTANA COLLEGE

PITT, C EVERETT; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007114), 19 MONTHS \$55,421

#### NEBRASKA

## UNIVERSITY OF NEBRASKA AT LINCOLN

SIMS, WARD L; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007073); 17 MONTHS \$17,174

#### NEW HAMPSHIRE

## PLYMOUTH STATE COLLEGE

BILHEIMER, MARY: COOPERATIVE COLLEGE SCHOOL SCIENCE (W007119); 19 MONTHS \$18,427

SYLVESTRE, MARK T; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007121); 20 MONTHS \$7,081

### NEW JERSEY

#### GEORGIAN COURT COLLEGE

FARLEY, SR MARY NICHOLAS; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007288); 20 MONTHS \$11,003



MONTCLAIR STATE COLLEGE

MINOR, BEN: COOPERATIVE COLLEGE SCHOOL SCIENCE (W007084); 19 MONTHS \$29 164

TRENTON STATE COLLEGE

PREGGER, FRED T; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007134); 20 MONTHS \$40,883

### **NEW MEXICO**

NEW MEXICO STATE UNIVERSITY

CARDEN, FRANK F; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007185); 19 MONTHS \$26,169

#### NEW YORK

PALDY, LESTER G; OTHER PROGRAM AWARDS (01AWDS); 18 MONTHS \$35,600

COLLEGE AT BUFFALO

SWARTNEY, 1 JOYCE; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007110); 20 MONTHS \$40,968

SCHWARTZ, DONALD: SPRING CONF F PRINCIPALSIINNER-CITY HIGH SCH CONC SOCIAL SCI CURRICULA (W007256); 18 MONTHS \$7,120 COLUMBIA UNIVERSITY

BEHNKE, FRANCES; OUT OF SCHOOL SCIENCE PROGRAM FOR JU-NIOR HIGH SCHOOL STUDENTS OF JOAN OF ARC NEW YORK CITY (Wooffis 001); 12 MONTHS \$32,398

SPARBERG, ESTHER B; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007188): \$26,013

JERICHO PUBLIC SCHOOLS

VERDONE, JOSEPH 8; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007290); 19 MONTHS \$3,576

LONG ISLAND UNIVERSITY

HELLMAN, MORTON J; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007189); 20 MONTHS \$42,941

NEW YORK UNIVERSITY

SHAMOS, WORRIS H; COMPLETION OF TEACHERS GUIDES FOR A NEW ELEM SCI CURRICULUM (COPES) (WOOSS11); 13 MONTHS \$59,800

POLYTROUNIC INSTITUTE OF BROOKLYN

BRAUN, LUDWIG; DEVELOPMENT OF COMPUTER-SIMULATION MATERIAL (W005888 001); 12 MONTHS \$20,300

BRAUN, LUDWIG: DEVELOPMENT OF COMPUTER-SIMULATION MATERIAL (W005885 002); 8 MONTHS \$20,000

BRAUN. LUDWIG; DEVELOPMENT OF COMPUTER-SIMULATION MATERIALS (W005888 003); 24 MONTHS \$124,900

STATE UNIVERSITY AT STONY BROOK

BREDDERMAN, THEODORE A: COOPERATIVE COLLEGE SCHOOL SCIENCE (W007181), 19 MONTHS \$15,717

SYRACUSE UNIVERSITY

DAVIS, ROBERT B: COOPERATIVE COLLEGE SCHOOL SCIENCE (W007145); 20 MONTHS \$28,880

DAVIS, ROBERT B. COOPERATIVE COLLEGE SCHOOL SCIENCE (W007195); 20 MONTHS \$37,686

DAVIS, ROBERT B; LEADERSHIP PREP F IMPLEMENTATIONITHE MADISON PROJ CURRICULUM (Wooteer); 18 MONTHS \$44,700

OSWALD, JAMES M: COOPERATIVE COLLEGE SCHOOL SCIENCE (W007293); 20 MONTHS \$26,338

TEACHERS COLLEGE

ROWE, MARY BUDD; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007185); 19 MONTHS \$25,781

UNIVERSITY OF ROCHESTER

MONTEAN, JOHN J; SPG CONF F TEAMS/SEC SCH ADMATCHER LEADERS ON THE ENVIRON STUD CURR (W007255); 18 MONTHS \$7,510

HEALTH RESEARCH INC-ROSWELL PARK DIVISION

MIRAND, EDWIN A; STUDENT SCIENCE TRAINING PROGRAM (W004005 001\*); \$209

### **NORTH CAROUNA**

APPALACHIAN STATE UNIVERSITY

ROBINSON, KENT; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007131); 19 MONTHS \$26,689

**BAST CAROLINA UNIVERSITY** 

MATTHEIS, FLOYD E; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007115); 19 MONTHS \$43,942

NORTH CAROLINA STATE UNIVERSITY AT RALEIGH

SPEECE, HERBERT E. AND BLAKEWAY, EDWARD G; LEADERSHIP PREP FOR IMPLEMENTATION OF ENG CONCEPT CURRICULUM PRO-JECT (W007276); 18 MONTHS \$84,800

UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

SCHLECHTY, PHILLIP C: LEADERSHIP PREP F IMPLEMENTA-TION/SOCIOL RESOURCES F THE SOCIAL STUDIES (W001260); 18 MONTHS \$52,600

#### NORTH DAKOTA

NORTH DAKOTA STATE UNIVERSITY

HILL, LOREN W; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007158); 19 MONTHS \$16,791

#### ÖHIO

ANTIOCH COLLEGE

PLUMER, STEPHEN B. A PROPOSED LONGITUDINAL COMPARATIVE STUDY OF EFFECTS AND IMPACTS OF 'MAN. A COURSE OF STUDY (MACOS) (W007627); 4 MONTHS \$49,400

FEDERATION FOR UNIFIED SCIENCE EDUCATION

SHOWALTER, VICTOR; ESTABLISHMENT OF FUSE CENTER FOR UNIFIED SCIENCE EDUCATION (WOOTER); 12 MONTHS \$82,200

MIAMI UNIVERSITY

MOORE, RICHARD W; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007066); 18 MONTHS \$13,451

OHIO STATE UNIVERSITY

LANGUIS, MARLIN; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007148): 19 MONTHS \$28,247

THOMSON, BARBARA S; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007158); 18 MONTHS \$31,878

OHIO UNIVERSITY

LIGHT, KENNETH H; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007074); 20 MONTHS \$46,856

### **OKLAHOMA**

OKLAHOMA STATE UNIVERSITY

KOPECKY, H P. COOPERATIVE COLLEGE SCHOOL SCIENCE (WOOTON): 21 MONTHS \$44,856

HECOCK, RICHARD D; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007188); 20 MONTHS \$47,165

JOHNSTEN, T D: LEADERSHIP PREP F IMPLEMENTIENG CONCEPTS CURR F SECONDARY SCH TCHERS (WOOTERS); 18 MONTHS \$44,100

#### OREGON

PORTLAND STATE UNIVERSITY

JORGENSEN, HAROLD C; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007090): 14 MONTHS \$28,581

LANGE, ERWIN F; SUMMER CONF FOR ELEMENTARY SCH ADM CON-CERNING NEW SCIENCE CURRICULA (WOOTEST): 18 MONTHS \$14,596

UNIVERSITY OF OREGON · EUGENE

HARRIS, WILLIAM H; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007118), 20 MONTHS \$42,067

UNIVERSITY OF PORTLAND

WHITE, CHARLES C; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007156); 20 MONTHS \$25,566

#### PENNSYLVANIA

CLARION STATE COLLEGE

MECHLING, KENNETH R; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007129): 19 MONTHS \$36,464

**EDINBORO STATE COLLEGE** 

CURRIE, JAMES F; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007184); 19 MONTHS \$28,787

ELIZABETHTOWN COLLEGE

ZIEGLER. ROBERT E; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007/20): 19 MONTHS \$21.284

INDIANA UNIVERSITY OF PENNSYLVANIA

RIBAN, DAVID M; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007145); 20 MONTHS \$24,530

PENNSYLVANIA DEPARTMENT OF EDUCATION

EDGAR, IRVIN T; CONFERENCES TO MOBILIZE LEADERSHIP FOR CHANGE IN ELEMENTARY SCHOOL PROGRAMS (W006704 001); 18 MONTHS \$ 15,100

PENNSYLVANIA STATE UNIVERSITY

BERNOFF, ROBERT A; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007097); 20 MONTHS \$30,435

DIETHORN, WARD S; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007/0J): 19 MONTHS \$27,878

SLIPPERY ROCK STATE COLLEGE

HOLLAND, MONTE W; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007161); 19 MONTHS \$36,708



#### TEMPLE UNIVERSITY

RAUN, CHESTER E: COOPERATIVE COLLEGE SCHOOL SCIENCE (WOOTISE): 19 MONTHS \$27.647

RAUN, CHESTER E; LEADERSHIP PREP F IMPLEMENTATIONISCIS IN URBAN AND SUB AREAS (WOOTER); 18 MONTHS \$48,500

### U S-SOUTH APRICA LEADER EXCHANGE PROGRAM INC.

Brewer, James C; Traveliso African Educators to NSF SUP-PLEMENTARY TRAINING PROGRAMS (WOOGSIJ); 12 MONTHS \$5,600

### UNIVERSITY OF PENNSYLVANIA

GIRAULT, EMILY: LEADERSHIP PREPARATION FOR IMPLEMENTA-TION OF ANTHROPOLOGY CURRICULUM STUDY PROJECT, SOCIOLOGI-CAL RESOURCES FOR THE SOCIAL STUDIES, AND HIGH SCHOOL GEOG-RAPHY PROJECT (W001811); 18 MONTHS \$14,100

### University of Pittsburgh

BRODY, H. D.; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007072); 14 Months \$3,890

#### WILKES COLLEGE

HOLDEN, S.J.; COOPERATIVE COLLEGE SCHOOL SCIENCE (WOOTIDI); 20 MONTHS \$36,901

### WILSON COLLEGE

GILES JR. LESTER A: COOPERATIVE COLLEGE SCHOOL SCIENCE (W007193); 19 MONTHS \$30,249

### RHODE ISLAND

### RHODE ISLAND COLLEGE

LUNDBERG, KENNETH V; COOPERATIVE COLLEGE SCHOOL SCIENCE (W00114); 19 MONTHS \$42,849

### SOUTH CAROLINA

### CLEMSON UNIVERSITY

WILCOX, L C; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007161); 18 MONTHS \$41,888

### UNIVERSITY OF SOUTH CAROLINA

SILVERNAIL, RICHARD G; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007149), 19 MONTHS \$30,865

#### **SOUTH DAKOTA**

#### AUGUSTANA COLLEGE

LINDELL, VERLYN L; CGOPERATIVE COLLEGE SCHOOL SCIENCE (W007147); 18 MONTHS \$29,791

#### TENNESSEE

### AUSTIN PEAY STATE UNIVERSITY

STEDMAN, CARLTON H; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007109); 19 MONTHS \$27,943

### EAST TENNESSEE STATE UNIVERSITY

PAFFORD, WILLIAM N; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007/14); 17 MONTHS \$18,620

### MEMPHIS STATE UNIVERSITY

PETERSON, GLEN E, AND CLEMINSON, RONALD W: SUMMER CONF FOR ELEMENTARY SCH ADM CONCERNING NEW SCIENCE CURRICU-LA (W00716): 18 MONTHS 415-445

### UNIVERSITY OF TENNESSEE AT CHATTANOOGA

BENSON, BERNARD W; COOPERATIVE COLLEGE SCHOOL SCIENCE (WOOTORE); 19 MONTHS \$22,319

ATOMIC ENERGY COMMISSION-OAK RIDGE OPERATIONS OFFICE-AEC RANDALL, COURTLAND S; ENVIRONMENTAL EXPERIMENTS PRO-GRAM (AG70260 001), 12 MONTHS \$11,000

#### TEXAS

CRESWELL, JOHN L; OTHER PROGRAM AWARDS (01AWDS); 14 MONTHS \$38,350

#### BISHOP COLLEGE

RODRIGUEZ, ARGELIA V; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007107); 19 MONTHS \$54.688

## PRAIRIE VIEW AGRICULTURAL & MECHANICAL COLLEGE

STEWART, A D; COOPERATIVE COLLEGE SCHOOL SCIENCE (WOOTIT9); 19 MONTHS \$27,337

### SAM HOUSTON STATE UNIVERSITY

VICK, GEORGE R; COPPERATIVE COLLEGE SCHOOL SCIENCE (WOO7176); 19 MONTHS \$19.069

### SOUTHERN METHODIST UNIVERSITY

NARDIZZI, LOUIS; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007078); 20 MONTHS \$32,664

BROWN, FRANK J PALASAJ D: LEADERSHP PREP FOR IMPLEMENTATION OF SEC SCH MATH CURR IMPROVEMENT ST (W007440); 18 MONTHS \$17,200

### SUL ROSS STATE UNIVERSITY

FLORES, ROMEO M; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007136); 14 MONTHS \$20,945

### UNIV OF TEXAS AT AUSTIN

CLARK, ROBERT RECK; MODEL PROJECT FOR UTILIZATION OF PROFESSIONAL SCIENTISTS AS ADVISORS TO SECOYDARY SCHOOLS IN TEXAS (WOOSTIG 001): 15 MONTHS \$27,199

MONTAGUE, EARL J; COOPERATIVE COLLEGE SCHOOL SCIENCE (WOOTISS); 19 KONTHS \$48,097

LITTLE, R N; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007180); 18
MONTHS \$28.402

#### UNIV OF TEXAS AT EL PASO

BOLEN, MAX C; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007181); 19 MONTHS \$34,875

#### UTAH

#### BRIGHAM YOUNG UNIVERSITY

WIGHT, TED; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007165): 18 MONTHS \$36,236

## SOUTHERN UTAH STATE COLLEGE

LEBARON, GEORGE: COOPERATIVE COLLEGE SCHOOL SCIENCE (W007077); 20 MONTHS \$38,741

LARSEN, WESLEY P. LEADERSHIP PREPARATION FOR IMPLEMENTATION OF ELEMENTARY SCHOOL SCIENCE (W007474); 18 MONTHS \$39,800

### UTAH STATE UNIVERSITY

CANNON, LAWRENCE O; COOPERATIVE COLLEGE SCHOOL SCIENCE (W00728J); 18 MONTHS \$64.806

#### VERMONT

### UNIVERSITY OF VERMONT

AGNE, RUSSELL M; INFO WORKSHOP FOR IMPLEMENTATIONIENG CONCEPTS CURR PROJ IN VERMONT (W007#50); 18 MONTHS \$8,500

#### VIRGINIA

### UNIVERSITY OF VIRGINIA

THOMPSON, ERTLE; SUMMER CONF FOR JUNIOR HIGH&MIDDLE SCH PRINCIPALS ON NEW SCI CURRICULA (W007254); 18 MONTHS \$12,310

### VIRGINIA POLYTECHNIC INSTITUTE

SWEETSER, EVAN A; COOPERATIVE COLLEGE SCHOOL SCIENCE (WOO7128); 19 MONTHS \$29,516

### VIRGINIA STATE COLLEGE

JEMISON, EVELYN W; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007181); 14 MONTHS \$28,680

## Washington

# EASTERN WASHINGTON STATE COLLEGE

HAMBLIN, EDWARD L; COOPERATIVE COLLEGE SCHOOL SCIENCE (W00718J); 19 MONTHS \$30,832

### UNIVERSITY OF PUGET SOUND

ACHESON, DONALD E: COOPERATIVE COLLEGE SCHOOL SCIENCE (WOO711J); 19 MONTHS \$36,834

### WASHINGTON STATE UNIVERSITY

ORLICH, DONALD C; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007286); 14 MONTHS \$24,898

### WEST VIRGINIA

### MARSHALL UNIVERSITY

ROGERS, WILEY S; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007177); 19 MONTHS \$20,714

### WEST VIRGINIA UNIVERSITY

BALCH, PATRICK E: COOPERATIVE COLLEGE SCHOOL SCIENCE PROGRAM (W006457 001); 13 MONTHS \$3,664

### WISCONSIN

### **EDGEWOOD COLLEGE**

DWYER, PAULINUS; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007184); 17 MONTHS \$21,085

## UNIVERSITY OF WISCONSIN, MADISON

ROMBERG, THOMAS A; ANALYSIS OF MATHEMATICS INSTRUCTION (W006707 001): 12 MONTHS \$87,700

WOERGER, WILLIAM W, AND MCNEARY, JAMES J; LEADERSHIP PREP F IMPLEMENTIA REG CNTR F THE ENG CONCEPTS CURR PROJ (W007280); 18 MONTHS \$55,900



WISCONSIN STAR UNIVERSITY, OSHKOSA

GIBBS, RON OU K, COOPERATIVE CLLEGE SCHOOL SCIENCE (WOOTIOS), 19 M. NTHS \$22,270

WISCONSIN STATE UNIVERSITY, STEVENS POINT

WOOD, ROGER L; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007491); 16 MONTHS \$24,576

Wisconsin State University. Superior

BESCH, GORDON O C; LEADERSHIP PREP F IMPLEMTISEC SCH PHYS SCI WORKSHPS TIME SPACE AND MATTER (WOOTERS); IS MONTHS \$50,100

WISCONSIN STATE UNIVERSITY, WHITEWATER

MONAHAN, PATRICK; COOPERATIVE COLLEGE SCHOOL SCIENCE (W007181); 18 MONTHS \$22.041

MAKURAT PHILLIP, LEADERSHIP PREP F IMPLEMENTATIONIU-ICSM JUNIOR HIGH MATH F UNDERACHIEVER (WOOTERS); 18 MONTHS

STEKEL, FRANK D; WORKSHOP IN INPLEMENTATION OF INTER-MEDIATE SCIENCE CURRICULUM STUDY LEVELS II AND III (WOO7715); 18 MONTHS \$12,400

#### UNDERGRADUATE I EVEL

ALABAMA AGRICULTURAL AND MECHANICAL UNIVERSITY SHIELDS, CHARLES F; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YO10197), 24 MONTHS \$9,900

AUBURN UNIVERSITY

NAGLE IR, H TROY; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010475); 24 MONTHS \$20,000

GADSDEN STATE JUNIOR COLLEGE

YANCEY, ELISE K; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOLOUT); 24 MONTHS \$1,800

erson state junior college

MCDONALD, CATHRYN S; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010303); 24 MONTHS \$4,000

LAWSON STATE JUNIOR COLLEG'S

FORD, BENNIE R; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010336); 24 MONTHS \$19,200

SPRING HILL COLLEGE

ARNOLD, MAGDA B; COSIP-INDIVIDUAL INSTITUTIONAL PROJECT (Y008448); 41 MONTHS \$228,300

TUSKEGEE INSTITUTE

HENDERSON, J H M; COSIP-INDIVIDUAL INSTITUTIONAL PROJECT (Y009327); 36 MONTHS \$329,600

TOLBERT, BERNADINE: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010353); 24 MONTHS \$4,600

HOWZE, GLENN; BLACK COLLEGES (FOUR-YEAR) (YOLOGAT); 36 MONTHS \$253 700

UNIVERSITY OF ALABAMA IN BIRMINGHAM

PEARSON, C A, AND SINGLETON, LILLIE; COSIP-COOPERATIVE PRO-JECT FOR 2-YR COLLEGES (Y009712); 15 MONTHS \$65,700

JONES, STANLEY T; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010075); 24 MONTHS \$4,000

UNIVERSITY OF ALABAMA, TUSCALOGSA

BERTE, NEAL R: INVITATIONAL CONFERENCE FOR LEADERS OF EXPERIMENTAL COLLEGES (YOODJOD); 15 MONTHS \$8,043

GARNER, ROBERT H, AND DOLLAR, JERRY L; COSIP-COOPERATIVE PROJECT FOR 2-YR COLLEGES (Y009713); 27 MONTHS \$33,600

#### ALASKA

UNIVERSITY OF ALASKA

FLANAGAN, PATRICK W; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010395); 24 MONTHS \$10,000

#### ARIZONA

ARIZONA STATE UNIVERSITY

SAUCK, WILLIAM A; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010187); 24 MONTHS \$2,700

BERMAN, NEIL S: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010261); 24 MONTHS \$12,000

MESA COMMUNITY COLLEGE

LYON, GARY F: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010111); 24 MONTHS \$3,500

UNIVERSITY OF ARIZONA

LYTLE, IVAN M; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010296); 24 MONTHS \$18,400

#### ARKANSAS

PHILANDER SMITH COLLEGE

JOHNSON, WILLIE B, INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIGSS): 24 MONTHS \$1,000

SOUTHERN STATE COLLEGE

RUTLEDGE, CARL T; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010031); 24 MONTHS \$1,900

UNIVERSITY OF ARKANSAS

anderson, Richard J; instructional scientific equipment PROGRAM (YOIOESS); 24 MONTHS \$20,000

MACDONALD, HAROLD C; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROCRAM (YOLOGOO); 24 MONTHS \$14,600

#### CAUFORNIA

BUTTE COLLEGE

SMITH, ROBERT D; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Yoldson), 24 MONTHS \$300

MCCART, PERRY D; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOLOSOT): 24 MONTHS \$1,000

California State College at Bakerspield

DETWILER, DANIEL P. AND FANG, FABIAN; COSIP-INDIVIDUAL IN-STITUTIONAL PROJECT (Y009700); 26 MONTHS 1229,000
OST, DAVID H; PROG USING USMES MIRLS TO IMPROVE THE

PRESERV ED! PROSPEC ELEM SCH TCH (YOOGTOS); 11 MONTHS \$66,600

CALIFORNIA STATE COLLEGE AT SONOMA

SHERMAN, ROBERT J; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010118); 24 MONTHS \$2,900

CALIFORNIA STATE POLYTECHNIC UNIV. POMONA

SHELL, B J; TECHNICIAN EDUCATION DEVELOPMENT PROGRAM IN-DIVIDUAL INST (Y010474); 24 MONTHS \$162,245

California State University, Humboldt

ALLEN, WILLIAM V; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010087); 24 MONTHS \$4,200

California State University, Long Beach

Grannell, Roswitha B; Instructional Scientific Equipment PROGRAM (YOLO214); 24 MONTHS \$5,800

California State University, Northridge

GUSTAFSON, WILLIAM 1; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIOSSE), 24 MONTHS \$15,500

California State University, Sacramento

NEWCOMB, CHARLES; INSTRUCTIONAL SCIENTIFIC EQUIPMENT

PREGRAM (YOLOLO), 24 MONTHS \$1,400
SHEA, MICHAEL J; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOLCHT); 24 MONTHS \$7,800

FORKEY, DAVID M. INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010463); 24 MONTHS \$9,200

California State University, San Diego

ATKINS, M D; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010188); 24 MONTHS \$4,200

ZEDLER, PAUL H; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010139); 24 KONTHS \$8,000

California state university, san luis obis po

RUSSELL, C R: TECHNICIAN EDUCATION DEVELOPMENT PROGRAM INDIVIDUAL INST (YOIOMS), 24 MONTHS \$51,080

**CERRITOS COLLEGE** 

WILSON, LOUIS; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010312); 24 MONTHS \$6,800

CHAPMAN COLLEGE

TWEED, EDWARD D, INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010211); 24 MONTHS \$4,700

HARVEY MUDD COLLEGE

KUBOTA, MITSURU; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010116); 24 MONTHS \$12,100

LOS ANGELES PIERCE COLLEGE

TONTSCH, JOHN: TECHNICIAN EDUCATION DEVELOPMENT PRO-GRAM INDIVIDUAL INST (Y010478); 24 MONTHS \$145,705

MODESTO JUNIOR COLLEGE

GOODROW, MARVIN; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010265); 24 MONTHS \$6,300

MOUNT ST MARYOS COLLEGE

LAMB, SANDRA I; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010207); 24 MONTHS \$3,500

OCCIDENTAL COLLEGE

SWENSON, LELAND C; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIOILE); 24 MONTHS \$4,800



WEST, C DAVID: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOIGHIS): 24 MONTHS \$17,800

OPTICS TECHNOLOGY INC

KAPANY, NARINDER S; CONTRACT FOR DEVELOPMENT OF A ONE. YEAR COURSE IN OPTICS FOR USE BY INTERMEDIATE-LEVEL COL-LEGE AND UNIVERSITY STUDENTS (C418000); 24 MONTHS \$149,800

BANKS, WILLIAM P. INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOLGOS): \$4 MONTHS \$6,500

BAN DIEGO CITY COLLEGE

BAUER, JOHN A: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010910); 24 MONTHS \$3,700

BANTA ANA COLLEGE

MILLER, EARL E: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOLGSID); 24 MONTHS \$2,600

STANFORD UNIVERSITY

WILCOX, JOHN M; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010178); 24 MONTHS \$9,900

UNIVERSITY OF CALIFORNIA, BERKELEY

PORTIB, ALAN M; CENTER OF EXCELLENCE IN SCIENCE EDUCA-TION (WOOSE 18"); 14 MONTHS 652,140

PORTIS, ALAN M; CENTER OF EXCELLENCE IN SCIENCE EDUCA-

TION (WOOSSIS COSTS) 14 MONTHS \$25,010
PHILLIPS, JOHN G; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOLOGOR); 24 MONTHS \$500

UNIVERSITY OF CALIFORNIA. DAVIS

BEADLE, CHARLES W; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010181); \$4 WONTHS \$8,200

University of California, Irvine

PARKER, WILLIAM; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010050); 24 MONTHS \$11,400

UNIVERSITY OF CALIFORNIA, LOS ANGELES

HAWTHORNE, M FREDERICK; INSTRUCTIONAL SCIENTIFIC EQUIP. MENT PROGRAM (Y010111): 24 MONTHS \$16,600

UNIVERSITY OF REDLANDS

SMITH LOWELL KENT: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIDSOT); 24 MONTHS \$5,100

UNIVERSITY OF SANTA CLARA

PPEIFFER, ROBERT J; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (VOIDERS); 24 MONTHS \$4,100

UNIVERSITY OF SOUTHERN CALIFORNIA

LIEN, ERIC J; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010086); 24 MONTHS \$6,500

WEST HILLS COLLEGE

HICKS, JAMES R; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Yolder); 24 MONTHS \$4,500

WHITTIER COLLEGE

GARDNER, LUCY; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOIOTIG): 24 MONTHS \$9.100

#### COLORADO

COLORADO COLLEGE

BUEBERT, BARRY J; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010103); 24 MONTHS \$5,800

COLORADO STATE UNIVERSITY

JORDAN, JOHN PATRICK: BIOLOGY CORE CO-TIE PROGRAM (YOOBSIT); 27 MONTHS \$260,000

JOHNSON, GARNIE, AND JORDAN, JOHN P; PROPOSAL FOR CON-TINUATION OF NSF GRANT NSF GY 2017 I APRIL (978 (Y0001)7 COI); 12 MONTHS \$240,000

MARTIN, STEPHEN G; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIOISS); 24 MONTHS \$12,100

AZARI, PARVIZ; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010434); 24 MONTHS \$17,100

SOCIAL SCIENCE EDUCATION CONSORTIUM INC

MORRISSETT, IRVING; IMPROVEMENT, ANALYSIS, AND USE OF SO-CIAL SCIENCE CURRICULUM MATERIALS, K-12 (W00997) 004°); 30 MONTHS \$51.896

UNIVERSITY OF COLORADO

HAAB, JOHN D. PRE-SERVICE ELEMENTARY SCHOOL TEACHER EDU-CATION (Y000318 001); 12 MONTHS \$201,900

JORDAN, HARRY F; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010136); 24 MONTHS \$18,600

DICKINSON, ARTHUR L; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIOILE); 24 MONTHS \$11,600

ALBERT, HARRISON B; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010186): 24 MONTHS \$7,600

UNIVERSITY OF DENVER

ANDERSON, ROOER A: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOLOSS); 24 MONTHS \$19,600

UNIVERSITY OF COLORADO-DENVER CENTER

DAMRAUER, R; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010397); 24 MONTHS \$10,200

#### CONNECTICUT

**FAIRFIELD UNIVERSITY** 

OCONNELL JR, E J; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-ORAM (YOLOROS); 24 MONTHS \$4,400

QUINNIPLAC COLLEGE

CARSKOF, MICHELE H; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010001); 24 MCNTHS \$2,400

UNIVERSITY OF CONNECTICUT

MUNSON, JAMES W. INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOIGIES); 24 MONTHS \$1,700

WESLEYAN UNIVERSITY

FRY, ALBERT J; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010300); 24 MONTHS 68,700

YALE UNIVERSITY

FOWLEY, TERRY L; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YO10058); 24 MONTHS \$3,800 SCHULTZ, HOWARD L: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIOIGI); 24 MONTHS \$5,900

#### DELAWARE

DELAWARE STATE COLLEGE

HELMY, EHSAN M; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOLOSES); 24 MONTHS \$6,400

#### DISTRICT OF COLUMBIA

NONE; OTHER PROGRAM AWARDS (GJAWDS): \$5,318

AMERICAN ASSOCIATION FOR ADVANCEMENT SCIENCE

MAYOR, JOHN R; SUPPORT FOR EIGHT PARTICIPANTS ATTENDING A TECHNICIAN EDUCATION PANEL EVALUATION MEETING (Y009338); 8 MONTHS \$3,475

AMERICAN ASSOCIATION OF PHYSICS TEACHERS

JOHNSON, WILBUR V. DIVISION OF UNDERGRADUATE EDUCATION IN SCIENCE NATL SCI FOUNDATION (YOOSISO); 36 MONTHS \$47,866

AMERICAN CHEMICAL SOCIETY

PECSOK, ROBERT L; CHEMICAL TECHNICIAN CURRICULUM PRO-JECT (Y004789 001): 6 MONTHS \$99,500

AMERICAN GEOLOGICAL INSTITUTE

ROMEY, WILLIAM D; EARTH SCIENCE TEACHER PREPARATION PROJECT (YOTES 001); 24 MONTHS \$80,500 THOMPSON, JOHN; EARTH SCIENCE TEACHER PREPARATION PRO-

JECT (Y007688 005); 12 MONTHS \$79,800

AMERICAN UNIVERSITY

ANDERSON, RICHARD R: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010155); 24 MONTHS \$2,400

ASSOCIATION OF AMERICAN GEOGRAPHERS

LOUNSBURY, JOHN F. COMMISSION ON COLLEGE GEOGRAPHY (E068818 008), 18 MONTHS \$178,122

**EXOTECH SYSTEMS INC** 

EHRMAN, LIBERT; AMENDMENT TO NSF C-43 T O 14 PROC FY-1872

EDUC DIRECTORATE PROPOSAL (C.19014 001); 2 MONTHS \$31,119
DAVIS, ALLAN S; TASK ORDER FOR SPECIAL PROCESSING OF COLLEGE SCIENCE IMPROVEMENT PROGRAM PROPOSAL AND AWARD DATA (C4550:6); 6 MONTHS \$6,500

HOWARD UNIVERSITY

TAYLOR, MODDIE D. INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOJOJ68); 24 MONTHS \$15,400

NATIONAL ACADEMY OF ENGINEERING

HALL, NEWMAN A; TO STIMULATE THE DEVELOPECT ENG COUR. SES AND CURR TO INCLUDE THE COMP SCI (Crioisi 003); 8 MONTHS

NTL INSTITUTE FOR APPLIED BEHAVIORAL SCIENCE

CALLAHAN, D G LAKE & D M; TEMPORARY SYSTEMS MANAGEMENT TRAINING AND EVALUATION (WOOSE16\*); 30 MONTHS \$12,000 SIKES, WALTER W; COLLEGE SCIENCE IMPROVEMENT PROGRAMS

(Y009347); 4 MONTHS \$5,400 SOCIETY OF AMERICAN FORESTERS

BOLLE, ARNOLD W, AND WEBSTER, HENRY H; CURRICULUM DEVELOPMENT PROJECT WORKSHOP PHASE (YOOSIS); 24 MONTHS \$16,578



#### PLODIDA

BROWARD COMMUNITY COLLEGE

BOCKSTEGE JR, BEN P. INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010301); 24 MONTHS \$1,700

DAYTONA BRACH COMMUNITY COLLEGE

BOOHER, THEODORE; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOLOSEO); 84 MONTHS \$700

FLORIDA AGRICULTURAL AND MECHANICAL UNIVERSITY

AXELSON, JULEIN M; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOLOJAI); 84 MONTHS \$900

PLORIDA PRESBYTERIAN COLLEGE

MACDOUGALL, JAMES, INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIOIPT); 24 MONTHS \$9,900

PLORIDA TECHNOLOGICAL UNIVERSITY

PATZ, BENJAMIN W; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOIGIIS): 24 MONTHS \$20,000 MILLER, HARVEY A: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-

GRAM (Y010412): 24 MONTHS \$15,600

ROLLINS COLLEGE

ROSS. JOHN 8: COSIP-INDIVIDUAL INSTITUTIONAL PROJECT (Y009485); 36 MONTHS \$196,600

STETSON UNIVERSITY

BEILER, THEODORE W: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIORIA), 24 MONTHS \$2,500

UNIVERSITY OF FLORIDA

DAMRON, B L. INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y0/0/83); 24 MONTHS \$1,900

UNIVERSITY OF SOUTH FLORIDA

NELSON, DOUGLAS L: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YDIDIJY); 24 MONTHS \$19,300

FILIPOWSKY, R F; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOIGIGI); 24 MONTHS \$8,700

#### GEORGIA

BERRY COLLEGE

CARPER, N GORDON; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIGIDE); 24 MONTHS \$2,500

FORD, DAVID A, AND CUNNINGHAM, WILLIAM GLENN: COSIP-COOPERATIVE PROJECT FOR 2-YR COLLEGES (YOOSTEE); 33 MONTHS \$75,000

GEORGIA COLLEGE AT MILLEDGEVILLE

COTTER, DAVID J; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010394); 24 MONTHS \$14,700

GEORGIA INSTITUTE OF TECHNOLOGY

CONNELLY, J A; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010344); 24 MONTHS \$13,800

MOREHOUSE COLLEGE

NORRIS, THOMAS E; BLACK COLLEGES (FOUR-YEAR) (YOIO441): 36 MONTHS \$351,500

HAYES, JOHN THOMPSON: BLACK COLLEGES & UR-YEAR) (YOIOIGI); 36 MONTHS \$280,900

SOUTHERN INTERSTATE NUCLEAR BOARD

RONEY, MAURICE W: NUCLEAR TECHNICIAN CURRICULUM PLANNING GUIDE (YOODJIS); 12 MONTHS \$20,450

SPELMAN COLLEGE

SMITH, BARNETT F; COLLEGE SCIENCE IMPROVEMENT PROGRAM (INDIVIDUAL INSTITUTIONAL PROJECTS-COSIP DI) (Y010407); 36 MONTHS \$279,400

UNIVERSITY OF GEORGIA

SCHELLY, ZOLTAN; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010067); 24 MONTHS \$10,300

SHAW, J SCOTT; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010211); 24 MONTHS \$3,000

#### HAWAU

UNIVERSITY OF HAWAIL

MOOKINI, E H, AND NAKAMURA, I; COSIP-COOPERATIVE PROJECT FOR 1-YR COLLEGES (Y009715); 6 MONTHS \$40,100 WINGERT, EVERETT; INSTRUCTIONAL SCIENTIFIC EQUIPMENT

PROGRAM (Y010358); 24 MONTHS \$8,100

BOISE STATE COLLEGE

CAMPBELL, R RUSSELL; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010034); 24 MONTHS \$11,600

College of Bouthern Idaho

FISHER, M A; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y0/0305); 24 MONTHS \$1,000

IDAHO STATE UNIVERSITY

HECKLER, GEORGE E: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010185); 24 MONTHS \$6,500

NORTHWEST NAZARENE COLLEGE

MARKS, DARRELL L: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010#49); 24 MONTHS \$4,800

#### ILLINOIS

DANVILLE JUNIOR COLLEGE

Huffman, curtis; instructional scientific equipment pro-GRAM (Y010408); 24 MONTHS \$5,000

ILLINOIS INSTITUTE OF TECHNOLOGY

TORDA, T P; AN EXPERIMENT IN ENGINEERING EDUCATION (Y009300 001); 24 MONTHS \$726,200

FILLER, ROBERT, INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010017); 24 MONTHS \$7,800

ILLINOIS STATE UNIVERSITY

RICHARDSON, ARLAN; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010040); 24 MONTHS \$6,900

LOYOLA UNIVERSITY

Harris, ronald w: instructional scientific equipment pro-GRAM (Y010073); 24 MONTHS \$2,200

Jameson, a Keith: Instructional Scientific Equipment Pro-GRAM (Y010341); 24 MONTHS \$6,500

MONMOUTH COLLEGE

SENN, DAVID J; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Yoldies); 24 MONTHS \$1,800

NORTHERN ILLINOIS UNIVERSITY

SPANGLER, CHARLES W: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010074); 24 MONTHS \$14,900

ROSSING, THOMAS; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010108); 24 MONTHS \$3,400

COLE, ALAN: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIO274): 24 NONTHS \$8,900

NORTHWESTERN UNIVERSITY

DRANOFF, JOSHUA S; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010016); 24 MONTH 3 \$10,600

MACKENZIE, FRED T: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010071), 24 MONTHS \$8,500

STRUEVER, STUART; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIGSJJ); 24 MONTHS \$2,400

SOUTHERN ILLINOIS UNIVERSITY - CARBONDALE

HOOD, WILLIAM C: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010149), 24 MONTHS \$4,200

UNIVERSITY OF CHICAGO

SWIFT, HEWSON; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010402); 24 MONTHS \$19,000

UNIVERSITY OF ILLINOIS AT CHICAGO CIRCLE

MURRAY, DARREL L. AND BERRY, JOHN M JR; COSIP-COOPERATIVE PROJECT FOR 4-YR COLLEGES (Y009723), 9 MONTHS \$21,700 LIU, CHUI FAN: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-

GRAM (Y010913); 24 MONTHS \$18,500

UNIVERSITY OF ILLINOIS AT URBANA armstrono, James W. and Thompson, Paul; cosip-cooperative PROJECT FOR 4-YR COLLEGES (Y009740); 42 MONTHS \$43,100

BELFORD, R L; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010069); 24 MONTHS \$6,200

WILLIAM RAINEY HARPER COLLEGE

BERNSTEIN, RICHARD M; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010257); 24 MONTHS \$13,100

#### INDIANA

ANDERSON COLLEGE

CRUIXSHANK JR, DONALD B; INSTRUCTIONAL SCIENTIFIC EQUIP-MENT PROGRAM (Y010081); 24 MONTHS \$10,800

BALL STATE UNIVERSITY

VAN ATTA, ROBERT E. INSTRUCTIONAL SCIENTIFIC EQUIPMENT

PROGRAM (Y010072); 24 MONTHS \$10,300 BENNETT, ALICE S, INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010079); 24 MONTHS \$6,100

ERRINGTON, PAUL R; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010J9J); 24 MONTHS \$1,800



#### DEPAUW UNIVERSITY

DAVIS, THE YAS A: COLLEGE SCIENCE IMPROVEMENT PROGRAMS UNDIVIDUAL INSTITUTIONAL PROJECTS) (Y008/15 001): 38 MONTHS \$181,800

#### WARLHAM COLLEGE

STRATTON, WILMER J; INSTAUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010176); 24 MONTHS \$4.800

#### HANOVER COLLEGE

ELLEFSEN, PAUL R; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010131), 24 MONTHS \$3.300

#### INDIANA UNIVERSITY, BLOOMINGTON

LEBLANC, JOHN F; INDIANA UNIVERSITY MATHEMATICS METHODS COMBINATION (Y009293 001); 12 MONTHS \$279,770

KLEIN JR. CORNELIS; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010015): 24 MONTHS \$12,800

#### MANCHESTER COLLEGE

EBERLY, WILLIAM R: COSIP-INDIVIDUAL INSTITUTIONAL PROJECT (7009497); 40 MONTHS \$120,700

#### MARIAN COLLEGE

EOFF, MICHAEL; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010406), 24 MONTHS \$300

#### PURDUE UNIVERSITY

NORDLAND, FLOYD H; AN INTEGRATED SCIENCE PROG FOR PRE-SERV ELEMENTARY SCHOOL TEACHERS (Y009898); 24 MONTHS \$249,360 CHRISTIAN, JOHN E; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010018); 24 MONTHS \$16,400

LEON, BENJAMIN J; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOLOIS); 24 MONTHS \$17,600

DANILOFF, RAYMOND G; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010439); 24 MONTHS 49,300

POSTLETHWAIT, SAMUEL N: THE EVALUATION OF MINICOURSES IN UNDERGRADUATE BIOLOGY AT TWELVE SELECTED COLLEGES AND UNIVERSITIES (YOLOLU); 36 MONTHS \$63,200

#### ROSE-HULMAN INSTITUTE OF TECHNOLOGY

ROGERS, CHARLES C: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010051), 24 MONTHS \$13,000

#### TAYLOR UNIVERSITY

NUSSBAUM, ELMER; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010273); 24 MONTHS \$2,000

#### UNIVERSITY OF NOTRE DAME

FIGRINDO, ROBERT P: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010084), 24 MONTHS \$17,800

YANG, K T; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010217); 24 MONTHS \$10,800

#### VALPARAISO UNIVERSITY

SHEWAN, WILLIAM: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010151): 24 MONTHS \$11,000

WALDSCHMIDT, RUDOLPH; INSTRUCTIONAL SCIENTIFIC EQUIP. MENT PROGRAM (YOIGISS): 24 MONTHS \$5,400

## PURDUE UNIVERSITY-INDIANAPOLIS REGIONAL CAMPUS

FIFE, WILMER K: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010133): 24 MONTHS \$20,000

#### AWO

#### AMERICAN POLITICAL SCIENCE ASSOCIATION

VAN DYKE, VERNON; PROGRAM FOR UNDERGRADUATE EDUCA-TION IMPROVEMENT IN POLITICAL SCIENCE (Y009331); 30 MONTHS \$486,870

#### COE COLLEGE

WATKINS, STANLEY R; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010154); 24 MONTHS 12,300

#### CORNELL COLLEGE

DESKIN, WILLIAM A; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010270), 24 MONTHS \$2,900

#### DRAKE UNIVERSITY

ROGERS, RODNEY A; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010054): 24 MONTHS \$9,600

#### GRINNELL COLLEGE

BAYS, JAMES PHILIP: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010060): 24 MONTHS \$5,000

#### IOWA STATE UNIVERSITY OF SCIENCE & TECHNOLOGY

REDMOND, JAMES R: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010016): 24 MONTHS \$20,000

GROENEVELD, RICHARD A; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010117); 24 MONTHS \$6,600

#### LUTHER COLLEGE

MOORCROFT, WILLIAM H; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y01008J); 24 MONTHS \$12,000

#### SIMPSON COLLEGE

UPDEGRAFF, WILLIAM E: COSIP-INDIVIDUAL INSTITUTIONAL FRO-JECT (Y00933); 17 MONTHS \$37,400

#### KANSAS

#### BETHANY COLLEGE

ENGLUND, CHARLES R: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOLD LESS ): 24 MONTHS \$2,500

#### FORT HAYS KANSAS STATE COLLEGE

DRESSLER, ROBERT L; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y01044); 24 MONTHS \$6,800

#### KANSAS STATE UNIVERSITY

SPANGLER, JOHN D. AND KITCHEN, WILLIAM C; COSIP-COOPERA-TIVE PROJECT FOR \$-YR COLLEGES (Y009715); 18 MONTHS \$50,300

#### UNIVERSITY OF KANSAS

KLEIN, RONALD L: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010209), 24 MONTHS \$5,400

HIERL, PETER; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOJO286): 24 MONTHS \$12,900

GAINES, MICHAEL S; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010187): 24 MONTHS \$1,300

#### WASHBURN UNIVERSITY OF TOPEKA

COHEN, SHELDON H; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010173): 24 MONTHS \$10,100

#### WICHITA STATE UNIVERSITY

BENNINGFIELD, LLOYD M; INSTRUCTIONAL SCIENTIFIC EQUIP. MENT PROGRAM (Y010164): 24 MONTHS 18,900

#### KENTUCKY

#### BEREA COLLEGE

BEEBE, THOMAS R; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOIGIGG); 24 MONTHS \$13,800

#### CENTRE COILEGE OF KENTUCKY

ELLIS, ROY; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010152); 24 MONTHS \$3,700

#### EASTERN KENTUCKY UNIVERSITY

GEORGE, TED M: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YGIGISS): 24 MONTHS \$3,800

#### MURRAY STATE UNIVERSITY

WHALEY, PETER W; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YG103J0): 24 MONTHS \$6,500

#### THOMAS MORE COLLEGE

MINER, GEORGE K; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOLOISS); 24 MONTHS \$10,500

#### LOUISIANA

#### GRAMBLING COLLEGE

KENNEDY, A P; BLACK COLLEGES (FOUR-YEAR) (Y010408); 36 MONTHS \$324,800

#### LOUISIANA STATE UNIVERSITY, BATON ROUGE

DANIEL JR, L R; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YG10184); 24 MONTHS \$4,200

GREENBERG, DAVID B; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010193), 24 MONTHS \$6,600

#### NORTHEAST LOUISIANA UNIVERSITY

SHUGART, CECIL C; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010361); 24 MONTHS \$10,000

#### TULANE UNIVERSITY

WEBB, GEORGE B, AND KELLER, JANE C; A PROGRAM TO CONSIDER SCIENCE, TECHNOLOGY AND SOCIAL CHANGE (Y009348), 14 MONTHS \$1,660

#### UNIVERSITY OF SOUTHWESTERN LOUISIANA

MERIWETHER, JOHN R. INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOLOGIS); 24 MONTHS 45,600

#### XAVIER UNIVERSITY OF LOUISIANA

DRAWE, SR M VERONICA: RLACK COLLEGES (FOUR-YEAR) (7009704); 36 MONTHS \$396,000

SOUTHERN UNIVERSITY-SOUTHERN UNIVERSITY IN NEW ORLEANS
DAVE, V R; BLACK COLLEGES (FOUR-YEAR) (Y01046J); 36 KONTHS
\$225,800

#### MAKU

ROWDOIN COLLEGE

HUNTINGTON, CHARLES E: INSTRUCTIONAL SCIENTIFIC EQUIP-MENT PROGRAM (YOLDSOS): 24 MONTHS \$3,800

UNIVERSITY OF MAINE, ORONO

WEAVER, DAVID L; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010327); 24 MONTHS \$1,900

WESTBROOK COLLEGE

VOLLMER, DOUGLAS; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOLOJAO); 24 MONTHS \$3,700

#### MARYLAND

NONE; OTHER PROCESSM AWARDS (OFAWDS); \$18213

ALLEGANY COMMUNITY COLLEGE

WORKMAN, GLENN O; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010301); 24 MONTHS \$4,300

CHARLES COUNTY COMMUNITY COLLEGE

JENSEN, BELVA L: DEVELOPMENT OF ESTUARINE RESOURCE TECHNICIANS (Y008514 001); 12 MONTHS \$76,500

JENSEN, BELVA L; DEVELOPMENT OF ESTUARINE RESOURCE TECHNOLOGY (Y608388 008); \$6 MONTHS \$37,382

UNIVERSITY OF MARYLAND, BALTIMORE

VINCT MT. JAMES: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010105); 24 MONTHS \$4,400

UNIVERSITY OF MARYLAND, COLLEGE PARK

RAMM, GORDON M. AND HURLBURT, EVELYN M; COSIP-COOPERA-TIVE PROJECT FOR 1-YR COLLEGES (Y000711); 12 MONTHS \$24,500

#### MASSACHURETTS

AMHERST COLLEGE

SARGENT, C DANN; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010035); 24 MONTHS \$14,400

BOSTON COLLEGE

EATHER, R H; EDUCATION FILM ON AURORA BOREALIS (Y009541); 12 MONTHS \$11,800

EATHER, R H; AMENDMENT NO. I TO- EDUCATIONAL FILM ON AU-RORA BOREALIS, GY-9141 (Y009141 001); 12 MONTHS \$2,970

ANDERSON, ROY S; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOIGIN); 24 MONTHS \$5,800

COLLEGE OF OUR LADY OF THE RLMS

WRIGHT, SR MARY L; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIOTTI); 24 MONTHS \$5,000

EDUCATION DEVELOPMENT CENTER

BRAINERD, JOHN G; MOTION PICTURES TO IMPROVE INSTRUCTION IN ELECTRICAL ENGINEERING (E003)56 005); 8 MONTHS \$74,480

LOWON, E L. UNIFIED SCIENCE & MATHEMATICS FOR ELEMENTA-RY SCHOOLS (Wocsent nost); \$17,970

CHURCHILL JR, J M B; ACTIVITIES RELATED TO SCIENCE EDUCA. TION (WOOd806"): 24 MONTHS \$49,500

LOMAN, EARL L; USMES DISTRICT IMPLEMENTATION MODELS (W007626); 12 MONTHS \$55.245

FIVE COLLEGE ASTRONOMY DEPARTMENT

IRVINE, WILLIAM M; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010111), 24 MONTHS \$20,000

HAMPSHIRE COLLEGE

FOSTER, JOHN M; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010130); 24 MONTHS \$4,600

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

TAYLOR, EDWIN F; CREATION, EVALUATION, AND DISSEMINATION OF TEACHING MATERIAL'S AND LEARNING FORMATS IN COLLEGE PHYSICS (GO17198 009); 24 MINTHS \$129.968

MOUNT HOLYOKE COLLEGE

DETONA, FRANCIS J; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010140); 24 MONTHS \$4,600

HABER-SCHAIM, URI, PREPARATION OF PHYSICS AND CHEMISTRY TEACHERS (Y009322 001); \$132,200

HABER-SCHAIM, URI; PREPARATION OF FHYSICS AND CHEMISTRY TEACHERS (Y009512 005); 5 MONTHS \$20,500

NORTHEASTERN UNIVERSITY

FAISSLER, WILLIAM; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y01011): 24 MONTHS \$3,500

TECHNICAL EDUCATION RESEARCH CENTER, INC.

FRANK, NATHANIEL H; THE DEVELMODULARIZED PHYS INSTR MATERIALS FOR TECHNICAL EDUCATION (YOURSIT OOI): 18 MONTHS \$120,300

University of massachusetts, amherst

NORKIN, LEONARD C: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOLOSIT): 24 MONTHS \$11,800

NASH, WILLIAM A; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOIOSEI): 24 MONTHS \$4,800

UNIVERSITY OF MASSACHUSETTS, BOSTON

BENNETT, RUTH R; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010185); 24 MONTHS \$6,800

WELLESLEY COLLEGE

BIRNEY, D SCOTT, INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010003); 24 MONTHS \$2,500

WESTERN NEW BNGLAND COLLEGE

DAVISON, W G; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010414); 24 MONTHS \$5,300

WORCESTER POLYTECHNIC INSTITUTE

GROGAN, WILLIAM R: COSIP-INDIVIDUAL INSTITUTIONAL PROJECT (Y00935J); 41 MONTHS \$783,400

KENNEDY, OWEN W: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010450); 24 MONTHS \$12,000

#### MICHIGAN

ALMA COLLEGE TOLLER, LOUIS; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010341); 24 MONTHS \$2,500

SHONK, CARL E, AND ELVE, ALBERTUS H; COSIP-COOPERATIVE PROJECT FOR 2-YR COLLEGES (Y000724); 18 MONTHS \$57,700

DELTA COLLEGE

MOST JR. CLARK; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOJOJIS); 24 MONTHS \$8,400

GENESEE COMMUNITY COLLEGE

DEGRAAF, DONALD E; FLINT INTRODUCTORY PHYSICS SEQUENCE (Y004784 005); 12 MONTHS \$39,696

WARD, RONALD W; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010077); 24 MONTHS \$4,700

HOPE COLLEGE

THARIN, J COTTER; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010110); 24 MONTHS \$5,400 MICHIGAN STATE UNIVERSITY

SIGNELL, PETER: PHYSICS INSTRUCTIONAL FILM DEVELOPMENT (Y009695); 12 MONTHS \$5,700

MICHIGAN TECHNOLOGICAL UNIVERSITY

WHITTEN, B K; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010048); 24 MONTHS \$18,300

BRUMM, D B; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010098); 24 MONTHS \$18,900

OAKLAND COMMUNITY COLLEGE

ROSENTHAL, STANLEY L; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOLOGOI); 24 MONTHS \$3,200

**OAKLAND UNIVERSITY** 

WEDEKIND, GILBERT L; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010096); 24 MONTHS \$17,500

SOCIETY OF MANUFACTURING ENGINEERS

GROVE, JON P; WORKSHOP ON MANUFACTURING ENGINEERING TECHNOLOGY (Y009350); 15 MONTHS \$6,900

Southwestern Michigan College

HART, ROGER A; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010889); 24 MONTHS \$1,300

UNIVERSITY OF MICHIGAN

WILLMARTH, WILLIAM W; INSTRUCTIONAL SCIENTIFIC EQUIP. MENT PROGRAM (Y010181); 24 MONTHS \$20,000 LEITH, EMMET N; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-

GRAM (Y010494); 24 MONTHS \$20,000 **WESTERN MICHIGAN UNIVERSITY** 

HERMAN, JOHN E: INSTRUCTIONAL SCIENTIFIC EQUIPMENS PRO-GRAM (Y010185); 24 MONTHS \$2,900

UNIVERSITY OF MICHIGAN-FLINT COLLEGE

MACKELA, ARTI A; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010217): 24 MONTHS \$10,100



#### MINNESOTA

AUGSBURG COLLEGE

ALTON, EARL R; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010038); 24 MONTHS \$4,400

COLLEGE OF ST TERESA

HORNER, OSCAR F; PRESERVICE SECONDARY SCHOOL TEACHER EDUCATION (7009190 001); 24 MONTHS \$118,650

SCHUTH, SR M KATARINA; INSTRUCTIONAL SCIENTIFIC EQUIP-MENT PROGRAM (YOIGISI); 24 MONTHS \$300

CONCORDIA COLLEGE AT MOORHEAD

JOHNSON, IVAN M; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIGH): 24 MONTHS \$3,800

MACALESTER COLLEGE

MINK, WALTER D. INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010131); 24 MONTHS 12:500

MANKATO STATE COLLEGE

INMAN, FRED W, AND SALA, REXFORD Q; COSIP-COOPERATIVE PRO-JECT FOR 2-YR COLLEGES (Y009718); 21 MONTHS 477,500

MORGAN, MAX H; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010828); 24 MONTHS \$2,400

MOORHEAD STATE COLLEGE

SIPSON, ROGER F; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YGIOTIS); 24 MONTHS \$3,700

BOUTHWEST MINNESOTA STATE COLLEGE

RIEDEL, ROBERT G; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010035); 24 MONTHS \$20,000

ST MARYOS JUNIOR COLLEGE

PETERSON, CAROL; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010401); 24 MONTHS 47,500

WINONA STATE COLLEGE

FOSS, FREDERICK W; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010190): 24 MONTHS \$2,000

UNIVERSITY OF MINNESOTA UNIVERSITY OF MINNESOTA, DULUTH HANSON, HOWARD G; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010255); 24 MONTHS \$15,000

#### MISSISSIPPI

DELTA STATE COLLEGE

BRADLEY, MILTON; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010380): 24 MONTHS \$6,100

BAST MISSISSIPPI JUNIOR COLLEGE

WILLIAMSON, TROY L; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YGIOJIS), 24 MONTHS \$5,200

MISSISSIPPI STATE UNIVERSITY

CORNELL, DAVID; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010219); 24 MONTHS \$6,900

RUST COLLEGE

RIHAN, TALAAT I; BLACK COLLEGES (FOUR-YEAR) (Y009708); 36 MONTHS \$127.300

BRENNAN, BARTLEY A; BLACK COLLEGES (FOUR-YEAR) (Y010406), 36 MONTHS 4311,400

TOUGALOO COLLEGE

GARNER, JOHN B; COSIP-INDIVIDUAL INSTITUTIONAL PROJECTS (YOULDER) 36 MONTHS \$163,000

GARNER, JOHN B; COSIP INDIVIDUAL INSTITUTIONAL PROJECT (Y009314 001); \$81,370

LOEWEN, JAMES W; BLACK COLLEGES (FOUR-YEAR) (Y009696); 36 MONTHS \$316,500

UNIVERSITY OF MISSISSIPPI

BASS, HENRY E; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010159); 24 MONTHS \$5,300

WILLIAM CARRY COLLEGE

WEST, ROSE G; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010178); 24 MONTHS \$5,600

#### MISSOURI

LINCOLN UNIVERSITY

COOK, NATHAN R; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010351); 24 MONTHS \$8,600

PARK COLLEGE

JIRGAL JR. GEORGE K; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010083): 24 MONTHS \$2,200

SOUTHWEST BAPTIST COLLEGE

LITTLE, B F; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIGS69); 24 MONTHS \$2,500

SOUTHWEST MISSOURI STATE COLLEGE

BANKS, LAWRENCE E: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOLOLAT); 24 MONTHS \$20,000

UNIVERSITY OF MISSOURI, COLUMBIA

DAVID, LARRY Q, AND SCHALLERT, WILLIAM F; COSIP-COOPERA-TIVE PROJECT FOR 2-YR COLLEGES (YOOFTI); 36 MONTHS 4110,300 WILLIAMS, FREDERICK; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010304); 24 MONTHS 14,200

UNIVERSITY OF MISSOURI, KANSAS CITY

NIU. H P; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOLOSZS); 24 MONTHS \$2,900

ST LOUIS JUNIOR COLLEGE DISTRICT-FLORISSANT VALLEY COMMUNITY COLLEGE

ALDRIDGE, BILL O; DESIGN PRODUCTION CLASSEM TEL AND EVALUATION MODULES/INSTE FOR TECH PHYS (Y002118 001); 18 MONTHS \$94.900

#### MONTANA

CARROLL COLLEGE

BOWMAN, NOEL E; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010156): 24 MONTHS \$11,000

COLLEGE OF GREAT FALLS

SCHNELLER, MICHAEL C: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010389): 24 MONTHS \$1,400

MONTANA STATE UNIVERSITY

SCHMITTROTH, LOUIS A: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010108); 24 MONTHS \$20,000

#### NEBRASKA

HASTINGS COLLEGE

LAMBERSON, ROLAND H; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOLOSH); 24 MOTTHS \$6,600

NEBRASKA WESLEYAN UNIVERSITY

FRENCH JR, WALTER B: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIGHO); 24 MONTHS \$4,200

UNIVERSITY OF NEBRASKA AT LINCOLN

DAM, RICHARD; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOLOGRA); 24 MONTHS \$8,400

#### NEVADA

UNIVERSITY OF NEVADA, LAS VEGAS

RANEY, JOSEPH F; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010189); 24 MONTHS \$4,800

UNIVERSITY OF NEVADA, RENO

DOUGLAS, BRUCE M; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOJOO 18): 24 MONTHS \$1,600
BARNES, GEORGE; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOJOI3): 24 MONTHS \$13,600

#### NEW HAMPSHIRE

AMERICAN UNIVERSITIES FIELD STAFF

MILLER, NORMAN N; DOCUMENTARY FILM PROJECT- THE PEASANT WORLD (Y009295 001); \$217,900

DARTMOUTH COLLEGE

STETLER, DAVID A; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010066): 24 MONTHS \$12,200

NEW ENGLAND COLLEGE

BODHOLT, FREDERICK B; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010160); 24 MONTHS \$4,500

ST ANSELMOS COLLEGE

UPHAM, ROY; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010148); 24 MONTHS \$1,800

UNIVERSITY OF NEW HAMPSHIRE, DURHAM

DAVIS JR, JAMES B; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010256); 24 MONTHS \$6,300

#### **NEW JERSEY**

DREW UNIVERSITY

MILLER, JAMES M; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y016350); 24 MONTHS \$11,000

FAIRLEIGH DICKINSON UNIVERSITY

SANTELLI, JOHN C; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010348); 24 MONTHS \$4,800

JUSTER, ALLAN: TECHNICIAN EDUCATION DEVELOPMENT PRO-GRAM INDIVIDUAL INST (Y010476), 24 MONTHS \$146,015

MIDDLESEX COUNTY COLLEGE

HANDLER, THOMAS; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOIGI4): 24 MONTHS \$13,400



#### MONTCLAIR STATE COLLEGE

CLIFFORD, PAUL C, AND CHANDLER, HORACE; COSIP-COOPERATIVE PROJECT FOR 4-YR COLLEGES (Y009718), 24 MONTHS \$34,500

#### NEWARK COLLEGE OF ENGINEERING

CLEMENTS, WAYNE; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010101); 24 MONTHS \$5,900

HANESIAN, DERAN, INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YG10983); 24 MONTHS \$12,800

#### PRINCETON UNIVERSITY

COYNE, LELIA; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010043); 24 MONTHS \$9,000

#### RUTGERS UNIVERSITY

LIVINGSTON JR, JAMES; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010170); 24 MONTHS \$20,000

#### STRVENS INSTITUTE OF TECHNOLOGY

BASKIN, LEONARD 8; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010391); 24 MONTHS \$18,900

#### UPBALA COLLEGE

GRAHAM, RICHARD; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOLOSIS); 24 MONTHS \$2,700

#### FAIRLEIGH DICKINSON UNIVERSITY-TEANECK CAMPUS

EBERHARD, ANATOL; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010041); 24 MONTHS \$4.300

#### NEW MEXICO

#### EASTERN NEW MEXICO UNIVERSITY

PITT, WILLIAM D; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010111); 24 MONTHS \$2,000

#### NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY

SCHAFER, ROLLIE; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010859); 24 MONTHS \$9,900

#### NEW MEXICO STATE UNIVERSITY

WILSON, DONALD B; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y01031), 24 MONTHS \$13,700

#### UNIVERSITY OF NEW MEXICO

BRADSHAW, MARTIN D; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOTORSE): 24 MONTHS \$9,800

#### **NEW YORK**

FORMAN, JAMES D; OTHER PROGRAM AWARDS (01AWDS); 15 MONTHS \$42,080

#### AMERICAN INSTITUTE OF PHYSICS

STRASSENBURG, ARNOLD A; NATIONAL TECH PHYSICS COMMITTEE AND PROJECT OFFICE (Y009319 001); 18 MONTES \$64,700

#### CANISHIS COLLEGE

BAYER, DEWEY J; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010088); 24 MONTHS \$1,500

#### COLUNGE AT BROCKPORT

DILCHER, RONALD C, AND JAEGER, GERN W; COSIP-COOPERATIVE PROJECT FOR TWO YEAR COLLEGES (YOO9718); 33 MONTHS \$69,200

#### COLLEGE AT OSWEGO

ZYCH, DALE A; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIOIIS); 24 MONTHS \$900

#### COLUMBIA UNIVERSITY

LOMAX, ALAN, AND ARENSBURG, CONRAD M; CHAREOMETRICS A METH FOR COMP ANALIBEHAVIORAL ISO-MORPHICS IN CULTURE (Y009358); 12 MONTHS \$119,710

#### CORNELL UNIVERSITY

FOTTLE, CHRISTOPHER; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010171); 24 MONTHS \$17,900

HOLCOMB, D F; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOLM 14): 24 MONTHS \$18,400

#### HUNTER COLLEGE

CECCARINI, COSTANTE; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010942); 24 MONTHS \$13,500

#### LEHMAN COLLEGE

VALDOVINOS, JACK G. INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOLOGIST): 24 MONTHS \$10,000

#### MATHEMATICAL ASSOCIATION OF AMERICA

RHEINBOLDT, WERNER C: COURSE CONT IMPUMNT, COLLEGE-MATHEMATICS (Y010184); 24 MONTHS \$65,800

LUCE, R DUNCAN, COURSE CONT IMPYMNT, COLLEGE-MATHE-MATICS (Y010485); 36 MONTHS \$79,900

#### NEW YORK UNIVERSITY

GOLDSTEIN, MAX: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010410), 24 MONTHS \$16,100

#### POLYTECHNIC INSTITUTE OF BROOKLYN

CAHILL, PATRICK; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010149), 24 MONTHS \$19,600

#### RENSSELAER POLYTECHNIC INSTITUTE

LEITNER, ALFRED, FILMS DEMONSTRATING ATOMIC STRUCTURE VIA ATOMIC SPECTRA (Y00093; 001); 12 MONTHS \$20,000

WAIT, SAMUEL C JR, AND BAUER, DOUGLAS J; COSIP-COOPERATIVE PROJECT FOR 1-YR COLLEGES (Y009717); 18 MONTHS \$44,000

KAUFMAN, HOWARD; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010070); 24 MONTHS 45,600

JANZ, O J: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010091); 24 MONTHS \$8,000

#### ST LAWRENCE UNIVERSITY

ENNS, MELVIN P. INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YG10351), 21 MONTHS \$4,800

#### STATE UNIVERSITY AT BINGHAMTON

STANNARD, CARL; TECHNICIAN EDUCATION DEVELOPMENT PRO-GRAM (Y009380 001); 18 MONTHS \$99.744

#### STATE UNIVERSITY AT BUFFALO

LEE, GEORGE C; DEVELOPMENT OF A SOCIO-ENGINEERING PRO-GRAM (YOOSJSS); 86 MONTHS \$118,925

MARTENS, HINRICH R; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010181); 24 MONTHS \$20,000

#### SYRACUSE UNIVERSITY

COPLIN, WILLIAM D; DEVEL&DISEMINATIONILEARNING PACKAGES FOR UNDERGRAD ED IN INTERNATI RELA (Y00814); 45 MONTHS \$99,100

KLARE, WARREN F; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010100), 24 MONTHS \$20,000

STABLER, EDWARD P, INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010105); 24 MONTHS \$14,400

#### UNIVERSITY OF ROCHESTER

HARBISON, KENNETH O; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010065); 24 MONTHS \$20,000

BANNISTER, T T; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010199); 24 MONTHS \$11,900

#### **NORTH CAROLINA**

#### CATAWBA COLLEGE

GOODMAN, TED W; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010410); 24 MONTHS \$20,000

#### EAST CAROLINA UNIVERSITY

MATTHEIS, FLOYD E; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010166); 24 MONTHS \$20,000

#### LENGTR COMMUNITY COLLEGE

KEEL, LOWELL L: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010815), 24 MONTHS \$300

#### NORTH CAROLINA AGRICULTURAL & TECH STATE UNIV

JACKSON, ARTHUR F; BLACK COLLEGES (FOUR-YEAR) (Y00\$70\$); 36 MONTHS \$312.200

SULLIVAN, WALTER W; BLACK COLLEGES (FOUR-YEAR) (Y009709); 36 MONTHS \$237,300

THOMPSON JR, C L; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010218); 24 MONTHS \$7,200

#### NORTH CAROLINA STATE UNIVERSITY AT RALEIGH

LYNCH, W K, AND NESBIT, R P; COSIP-COOPERATIVE PROJECT FOR 2-YR COLLEGES (Y009710), 6 MONTHS \$48,700

THEIL, ELIZABETH C; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010200); 24 MONTHS \$4,900

#### PEMBROKE STATE UNIVERSITY

WALLINGFORD, JOHN S; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010089); 24 MONTHS \$5,300

#### regional BD Lab for the Carolinas 4 Virginia

STRALEY, JOSEPH W; REVITALIZATION OF THE FRESHMAN-SOPHOMORE PHYSICS PROGRAM AT TWENTY COLLEGES (Y009811 002\*); 12 MONTHS \$27,225

#### SHAW UNIVERSITY

GHOSH, KALYAN K; BLACK COLLEGES (FOUR-YEAR) (Y010440); 36 MONTHS \$342,000

ELKORDY, ABDUL H; BLACK COLLEGES (FOUR-YEAR) (Y010488); 36 MONTHS \$338,600

#### UNIVERSITY OF NORTH CAROLINA AT GREENSBORO

PUTERBAUGH, WALTER H; INSTRUCTIONAL SCIENTIFIC EQUIP-MENT PROGRAM (YOIGSSE); 24 MONTHS \$1,000



UNIVERBITY OF NORTH CAROLINA AT WILMINGTON

THAYER, PAUL A: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-ORAM (YOIOISI): 24 MONTHS \$4,900

WESTERN CAROLINA UNIVERSITY

MOODY, TED C; PHYSICAL SCIENCE TEACHERS PROGRAM (Y009701); 14 MONTHS \$187,740

WILCOX, J T; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIGIJI): 24 MONTHS \$10,600

#### **NORTH DAKOTA**

JAMESTOWN COLLEGE

CLAFLIN, W JOSEPH; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010881); 24 MONTHS 84.900

NORTH DAKOTA STATE UNIVERSITY

BUCHHOLZ, EUGENE K; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010106); 24 MONTHS \$5,500

UNIVERSITY OF NORTH DAKOTA

LYKKEN, G I; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010088); 24 MONTHS \$1,000

#### OHIO

BOWLING GREEN STATE UNIVERSITY

KINSTLE, THOMAS H; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010191); 24 MONTHS 47,100

CASE WESTERN RESERVE UNIVERSITY

KUPER, ALAN B; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010890); 24 MONTHS 45,800

CLEVELAND STATE UNIVERSITY

KROUSE, CHARLES L; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010194): 24 MONTHS \$19,800

FINDLAY COLLEGE

STEPHENS, LAWRENCE J; COSIP-INDIVIDUAL INSTITUTIONAL PRO-JECT (Y009J44); 18 MONTHS \$61,400

HEIDELBERG COLLEGE

FORBES, PRESTON; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010109); 24 MONTHS \$5,500

KENT STATE UNIVERSITY

SPIELBERG, N; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Yaioi7i); 24 MONTHS \$7,800

KENYON COLLEGE

CLIFFORD, L THOMAS; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIOJSO): 24 MONTHS \$7,700

MARIETTA COLLEGE

PRINCE, ALBERT; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YGIOSSO): 24 MONTHS \$3,900

MIAMI UNIVERSITY

GRIFFIN, CHARLES C; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010150): 24 MONTHS \$4,800

HEIMSCH, CHARLES; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010363), 24 MONTHS \$8,000

OHIO STATE UNIVERSITY

YOVITS, MARSHALL C; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010474); 24 MONTHS \$7,100

OHIO UNIVERSITY

SMITH, IVAN K; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010081): 24 MONTHS 42,000

UNIVERSITY OF AKRON

KAYA, AZMI; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y0101001); 24 MONTHS \$8,400

UNIVERSITY OF CINCINNATI

ALEXANDER, JOHN J; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIO12); 24 MONTHS \$10,300

UNIVERSITY OF DAYTON

MCDOUGALL, KENNETH 1; INSTRUCTIONAL SCIENTIFIC EQUIP-MENT PROGRAM (YOIGESS); 24 MONTHS \$3,300

UNIVERSITY OF TOLEDO

JONES JR, MILLARD I.; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010241); 24 MONTHS \$6,700

WRIGHT STATE UNIVERSITY

GUPTA, NARESH N; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010017); 24 MONTHS \$20,000

#### OKLAHOMA

BAST CENTRAL STATE COLLEGE

BULMAN, JOHN; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOI0212); 24 MONTHS \$600 ORLAHOMA STATE UNIVERSITY

MCCOLLOM, KENNETH A; THE DEVELAIMPLEMENTATIONIA PREPROFESSIONAL INDIVID PRESCRIB INSTR CURR (Y008310 001): 12 MONTHS \$59,560

OSCAR ROSE JUNIOR COLLEGE

PARK, ROBERT G; TECHNICIAN EDUCATION DEVELOPMENT PRO-GRAM INDIVIDUAL INST (YOLOLSI); 15 MONTHS \$125,000

SOUTHEASTERN STATE COLLEGE

EGGLETON, GORDON; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOLOWS); 24 MONTHS \$1,500

**BOUTHWESTERN STATE COLLEGE** 

ARMOUDIAN, GARABED; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010112); 24 MONTHS \$9,000

ARMOUDIAN, GARABED; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010138); 24 MONTHS \$2,900

HAMM, DONALD I; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOIGHD): 24 MONTHS \$3,500

UNIVERSITY OF OKLAHOMA

BLISS, HORACE H, AND DUNCAN, HOYT D; COSIP-COOPERATIVE PROJECT FOR 4-YR COLLEGES (YODITES); 15 MONTHS \$47,000 KURIGER, WILLIAM L; INSTRUCTIONAL SCIENTIFIC EQUIPMENT

PROGRAM (YOLOITA); 24 MONTHS \$6,700

UNIVERSITY OF TULSA

MCCOY, JEROME D. INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010177), 24 MONTHS \$5,300

#### OREGON

LANE COMMUNITY COLLEGE

PARRO, EUGENE Z; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOLOGII), 24 MONTHS \$2,200

OREGON STATE UNIVERSITY

LAWRENCE, ROBERT; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010114); 24 MONTHS \$5,000

KLINGEMAN, PETER C; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (VOIDIN); 24 MONTHS 42,600

LARSON, MILTON B; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010819), 24 MONTHS \$3,600

PORTLAND STATE UNIVERSITY

MCCLURE, DAVID W: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010092); 24 MONTHS \$1,500

REED COLLEGE

WEIR, WILLIAM D; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010202); 24 MONTHS \$20,000

#### PENNSYLVANIA

ALBRIGHT COLLEGE

HELLER, MORGAN S; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010048); 24 MONTHS \$4,100

ALLEGHENY COLLEGE

BIVENS, RICHARD L; COLLEGE SCIENCE IMPROVEMENT PROGRAM (INDIVIDUAL INSTITUTIONAL PROJECTS) (Y008318); 36 MONTHS \$299,700 BUCKNELL LINIVERSITY

NICKELSEN, RICHARD; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010044); 24 MONTHS \$2,100

TONZETICH, JOHN; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOIOISI); 24 MONTHS \$6,400

ADKINS, DAVID M; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOIOJST); 24 MONTHS \$4,300

CARNEGIE MELLON UNIVERSITY

LUPIS, C H P; A PEDAGOGICAL TOOL FOR THE TEACHING OF METAL-LURGY& MATERIALS SCIENCE (Y009J16); 24 MONTHS \$89,260

CHATHAM COLLEGE

HESS, CONRAD M; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOLO195): 24 MONTHS \$4,000

CHEYNEY STATE COLLEGE

OLIVER, JAMES B; BLACK COLLEGES (FOUR-YEAR) (Y010467); 24 MONTHS \$287,400

**ELIZABETHTOWN COLLEGE** 

LAUGHLIN, RONALD L; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YGIOJIS); 24 MONTHS \$2,700

FRANKLIN AND MARSHALL COLLEGE

STEWART, CHARLES N; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIO14); 24 MONTHS \$3,900 WAPD, WILLIAM F; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-

GRAM (Y010168); 24 MONTHS \$5,800

DUNATHAN, H C; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010291); 24 MONTHS \$14,600



JUNIATA COLLEGE

SCHETTLER, PAUL D. INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOLDSEI); 24 MONTHS \$5,500

KEYSTONE JUNIOR COLLEGE

CUPILLARI, THOMAS G: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (7009704); 12 MONTHS \$3,430

LASALLE COLLEGE

WILLENS, JEFFREY B; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIGSTO); 24 WONTHS \$3,000

LEHIGH UNIVERSITY

LUYBEN, W L; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010403): 24 MONTHS \$14,700

PENNSYLVANIA STATE UNIVERSITY

WEIDHAAS, ERNEST R; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOLOISS): 24 MONTHS \$4,900

PMC COLLEGES

GOTTLIEB, IRVIN M; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010377): \$4 MONTHS \$1,700

SUSQUEHANNA UNIVERSITY

GIFFIN, GYNITH; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIGIST); 24 MONTHS \$5,400

SWARTHMORE COLLEGE

GILBERT, CHARLES E. COSIP-INDIVIDUAL INSTITUTIONAL PROJECT (Y009314); 42 MONTHS \$270,400

TEMPLE UNIVERSITY

CREAMER, ROBERT H; TECHNICIAN EDUCATION DEVELOPMENT PROGRAM (Y010175); 36 MONTHS \$130,000

UNIVERSITY OF PITTSBURGH

FLEMING, JOHN F; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Fungases: 24 MONTHS \$11,800

UNIVERSITY OF SCRANTON

DUNSTONE, JOHN J; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOIOJI): 24 MONTHS 45,600

WASHINGTON AND JEFFERSON COLLEGE

VINSON, JOE A; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010037); 24 MONTHS \$3,700

WAYNESBURG COLLEGE

LACOUNT, ROBERT B; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010260); 24 MONTHS \$3,600

PENNSYLVANIA STATE UNIVERSITY BEAVER CAMPUS

WEIDHAAS, ERNEST R; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOLO188); 24 MONTHS \$4,900

#### PUERTO RICO

INTER AMERICAN UNIVERSITY OF PUERTO RICO

VERTER, HERBERT S; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y0/0364); 24 MONTHS \$6300

#### RHODE ISLAND

PROVIDENCE COLLEGE

NASSIFF, PETER J; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010356); 24 MONTHS \$900

RHODE ISLAND COLLEGE

NAZARIAN, JOHN; PILOT PROGIAN INNOVATIVE KETHODITRAINING CHEMISTRY PHYSICS TEACHERS (Y0100JJ); 21 MONTHS \$13,300

UNIVERSITY OF RHODE ISLAND

COBB, J STANLEY; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010059); 24 MONTHS \$16,800

POULARIKAS, ALEXANDER; INSTRUCTIONAL SCIENTIFIC EQUIP-MENT PROGRAM (Y010281); 24 MONTHS \$10,000

#### SOUTH CAROUNA

CLEMSON UNIVERSITY

HELGERT, H J; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010154); 24 MONTHS \$10,900

FRIENDSHIP JUNIOR COLLEGE

SEN, SHUKDEB; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010304): 24 MONTHS \$3,100

FURMAN UNIVERSITY

SMITH, GARY C; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010115); 24 MONTHS 17,900

BREWER, CHARLES L; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010927); 24 MONTHS \$3,900

PRESBYTERIAN COLLEGE

JAMES, FREDERICK C; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010323); 24 MONTHS \$8,800

8 C STATE BRD TECHNICAL & COMPREHENSIVE EDU

SCOTT, W WAYNE; TED TEC(TECHNICIAN EDUC DEVELOPMENT FOR TECHNICAL EDUCATION CENTERS) (Y010178); 21 MONTHS \$218,150

SPARTANBURG COUNTY TECHNICAL EDUCATION CENTER

WINGATE, JAMES A: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010400); 24 MONTHS \$5,000

UNIVERSITY OF SOUTH CAROLINA

HOLMES, ROGER A; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010920); 24 MONTHS \$20,000

#### SOUTH DAKOTA

MOUNT MARTY COLLEGE

DIGGINS, SR KIERAN: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010150): 24 MONTHS \$4,000

SOUTH DAKOTA SCHOOL OF MINES AND TECHNOLOGY

GROVES, WILLIAM N; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010064): 24 MONTHS \$7,000

SOUTH DAKOTA STATE UNIVERSITY

NELSON, GORMAN R; EVALUATION AND CONTINUED DEVELOP-MENT OF GEOMETRIC AND GRAPHIC AIDS FOR COLLEGE CALCULUS (Y005901 008); 3 MONTHS \$4,960

TUNHEIM, JERALD A; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOLOUS); 24 MONTHS \$4,100

TENNESSEE

CHRISTIAN BROTHERS COLLEGE

STRAIGHT, JAMES W. INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010349); 24 MONTHS \$2,700

EAST TENNESSER STATE UNIVERSITY

HUANG, THOMAS T S; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOLOGI); 24 MONTHS \$3,000

LAMBUTH COLLEGE

BEASLEY, JAMES G; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIGHI), 24 MONTHS \$1,200

LANE COLLEGE

MCCLURE, WESLEY C; BLACK COLLEGES (FOUR-YEAR) (Y009708); 39 MONTHS \$240,900

OAK RIDGE ASSOCIATED UNIVERSITIES

DUGGAN, JEROME L; SCIENCE CURRICULUM IMPROVEMENT PROGRAM (AGOOMS): 24 MONTHS \$53,400

TENNESSEE TECHNOLOGICAL UNIVERSITY

MARTIN, ROBERT E; TECH AQUA PROJECT (Y007679 001\*); \$30,000

UNIVERSITY OF TENNESSEE, KNOXVILLE

BISHOP JR, ASA ORIN; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010145); 24 MONTHS \$20,000 NOEL, CHARLES J; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-

GRAM (Y010292); 24 MONTHS \$10,800

UNIVERSITY OF THE SOUTH

CAMP, DAVID B; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010019); 24 MONTHS \$4,900

VANDERBILT UNIVERSITY

MARX, MORRIS L, AND SULLIVAN, G WAYNE; COSIP-COOPERATIVE PROJECT FOR 2-YR COLLEGES (Y002721); 30 MONTHS \$33,800 WAGNER, ROBERT A; INSTRUCTIONAL SCIENTIFIC EQUIPMENT

PROGRAM (Y01024); 24 MONTHS \$9,900

#### TEXAS

AMARILLO COLLEGE

ADKINS, A F; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010309): 24 MONTHS \$3,800

AUSTIN COLLEGE

MACKEY, J LINN; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010188); 24 MONTHS \$11,700

DALLAS BAPTIST COLLEGE

ROBBINS, HERBERT C; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010399); 24 MONTHS \$1,600

HOUSTON BAPTIST COLLEGE

WARREN, DORIS C; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010274); 24 MONTHS \$1,600

LUBBOCK CHRISTIAN COLLEGE

SHERROD, LYNN; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010381); 24 MONTHS \$1,000

SOUTHERN METHODIST UNIVERSITY

NARDIZZI, LOUIS R; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010155); 24 MONTHS \$8,800



## AT MARYS UNIVERSITY OF SAN ANTONIO

MACHIA, BOLLERA; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOLGGLE): 24 MONTHS \$1,900

FETZER, HOMER D; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOLOTOT): 24 MONTHE \$2,900

#### TEXAS A & M UNIVERSITY

PLASS, GILBERT; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010321); 24 MONTHS \$10,400

#### TEXAS CHRISTIAN UNIVERSITY

Britton, Joseph C; instructional scientific equipment pro-GRAM (YOJORIS: 24 MONTHS \$4,900

#### TEXAS LUTHERAN COLLEGE

BIER, H D; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010081); 24 MONTHS \$6,500

#### TEXAS SOUTHERN UNIVERSITY

INGRAM, THEODORE; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010/38): 24 MONTHS \$2,000

RONEY, MAURICE W: A CONFERENCE TO EXPLORE THE NEED FOR RESEARCH AND DEVELOPMENT IN TECHNICAL EDUCATION (YOSSTOT); 4 MONTHS \$8,200

#### TRXASTECH UNIVERSITY

KRISTIANSEN, M. DEVELOPMENT OF LASER EXPERIMENTS FOR UNDERGRADUATE ELECTRICAL ENGINEERING STUDENTS (YOOATS) 008); 12 MONTHS \$700

TROST, THOMAS F: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010070): 24 NONTHS 49,200

PORTNOY, WILLIAM M; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIOMS); 24 MONTHS \$3,300

#### UNIV OF TEXAS AT ARLINGTON

BAERWALDT, JAMES; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIGEST), 24 MONTHS \$4,700

#### UNIV OF TEXAS AT AUSTIN

LEE, ADDISON E; DEVELOPMENT OF A NEW INTERDISCIPLINARY EARTH SCIENCE COURSE (Y009JJS); 12 MONTHS \$86,694

ALLAN, J J LAGOWSKIAJ J; COURSE CONT IMPUNNT, COLLEGE-IN-TERDISCIPLINARY USEICOMPUTER BASED TEACHING TECHNIQUES IN UNDER-GRAD SCI & ENG EDUC (YOSSIAO); 12 MONTHS \$337,150

BOYER, ROBERT E, AND LORKE, DONALD H; COSIP-COOPERATIVE PROJECT FOR 4-YR COLLEGES (Y009727); 15 MONTHS \$68,500

NOLLE, A WILSON; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010134); 24 MONTHS \$6,100

SCHMIDT, PHILIP S; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010164); 24 MONTHS \$19,500

## UNIV OF TEXAS AT EL PASO

MAXWELL, GERALD G; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010121), 24 MONTHS \$20,000

CANARIS, A G; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIO146); 24 MONTHS \$14,700

#### UNIVERSITY OF HOUSTON

WALKER, ROBERT H; A COORDINATED PROGRAM IN PHYSICAL SCIENCE AND METHODS FOR PRE-SERVICE ELEMENTARY TEACHERS (Y009354); 26 MONTHS \$234,615

TRAYLOR, D REGINALD, AND GILSON, CLAUDE F; COSIP-COOPERA-TIVE PROJECT FOR 1-YR COLLEGES (Y009714); 9 MONTHS \$16,700

BEIL, RALPH GREGORY; BLACK COLLEGES (FOUR-YEAR) (Y010496); 24 MONTHS \$166,600

#### UTAH

#### BRIGHAM YOUNG UNIVERSITY

CHASE, KENNETH WAYNE; INSTRUCTIONAL SCIENTIFIC EQUIP-MENT PROGRAM (YOIO101); 24 MONTHS 19,000

#### UNIVERSITY OF UTAH

BAER, A D; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010043), 24 MONTHS \$2,000

HATHAWAY, RALPH R; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010219), 24 MONTHS \$3,700

#### UTAH STATE UNIVERSITY

FLETCHER, WILLIAM I; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y0/0080); 24 MONTHS \$13,400

#### VERMONT

#### NURWICH UNIVERSITY

PYPER, GORDON R; TECHNICIAN EDUCATION DEVELOPMENT PRO-GRAM INDIVIDUAL INST (YOIO180); 36 MONTHS \$175,240

#### UNIVERSITY OF VERMONT

BROWN, DAVID B: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010090); 24 MONTHS \$9.200

#### VIRGINIA

NONE; OTHER PROGRAM AWARDS (01AWDS); \$1,500

#### AVERETT COLLEGE

BRACHMAN, RUSSELL C: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010#28); 24 MONTHS \$5,900

CRAWFORD, GEORGE W. INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (YOIOPOI); 24 MONTHS \$2,500

#### HAMPTON INSTITUTE

DUNCAN, NANCY C; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOIO127): 24 MONTHS \$800

#### NORFOLK STATE COLLEGE

HARRIS, JONATHAN T; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010198); 24 MONTHS \$2,900

#### OLD DOMINION UNIVERSITY

KUPER, HARRY S; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010050): 24 MONTHS \$4,300

DEAL, JOSEPH H: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010171); 24 MONTHS \$14,600

#### UNIVERSITY OF RICHMOND

TOWLE, DAVID W: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010198); 24 MONTHS \$6,600

#### UNIVERSITY OF VIRGINIA

MOCHEL, EDWARD V; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010099); 24 MONTHS \$2,300

HAVILAND, JOHN KENNETH: INSTRUCTIONAL SCIENTIFIC EQUIP-MENT PROGRAM (YOIGEST); 24 MONTHS \$3,900

HUBBARD, ROBERT M: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010859); 24 MONTHS \$5,500

## VIRGINIA COMMONWEALTH UNIVERSITY

WORLAND, PETER B; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010120); 24 MONTHS \$5,000

#### VIRGINIA STATE COLLEGE

STONE, DAVID M; COSIP-INDIVIDUAL INSTITUTIONAL PROJECT (Y009J14); 18 MONTHS \$137,700

BECK, JAMES D. INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010097); 24 MONTHS \$4,800

#### WASHINGTON

#### EDMONDS COMMUNITY COLLEGE

HARDY, SHEILA A: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010314); 24 MONTHS \$4,300

#### GONZAGA UNIVERSITY

REMONDINI, DAVID J; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010384); 24 MONTHS \$2,300

#### NORTHWEST COLLEGE

GUSTAFSON, J PHILIP, INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010388); 24 MONTHS \$500

#### SEATTLE PACIFIC COLLEGE

BRUCE, DAVID S; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010282); 24 MONTHS \$5,600

#### UNIVERSITY OF PUGET SOUND

BLANKS, GEORGE A; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010380); 24 MONTHS \$4,700

#### WASHINGTON STATE UNIVERSITY

AUSTIN, GEORGE T: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010214); 24 MONTHS \$3,800

CROSBY, GLENN A; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOIOJJS); 24 MONTHS \$18,000

#### WEST VIRGINIA

#### WEST VIRGINIA UNIVERSITY

HAMILTON, R M; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (1'010378); 24 MONTHS \$6,500 SWARTWOUT, ROBERT E; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y0/0379); 24 MONTHS \$4,100

#### CARROLL COLLEGE

FALLGATTER, MICHAEL: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010278); 24 MONTHS \$6,100

WISCONSIN



#### DISTRICT ONE TECHNICAL INSTITUTE

ATKINS, WAYNE R; TECHNICIAN EDUCATION DEVELOPMENT PRO-GRAM INDIVIDUAL INST (YOTOLES); 36 MONTHS \$78,960

CAMPOS, FRANCIS THOMAS; INSTRUCTIONAL SCIENTIFIC EQUIP-MENT PROGRAM (Y010095); 24 MONTHS \$12,400

#### MILWAUKEE SCHOOL OF ENGINEERING

BRAUN, ROBERT W; TECHNICIAN EDUCATION DEVELOPMENT PRO-GRAM INDIVIDUAL INST (YOIO177); 12 MONTHS \$33,680

#### UNIVERSITY OF WISCONSIN, MILWAUKEE

STEBER, GEORGE R; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (YOLOSUS); 24 MONTHS \$9,200

#### WISCONSIN STATE UNIVERSITY, BAU CLAIRE

DUERST, RICHARD; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010118); 24 MONTHS \$5,200

SMOOT, KENNETH E; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010360); 24 MONTHS \$6,100

#### ISCONSIN STATE UNIVERSITY, OSHKOSH

JONES, NORRIS W: INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010477): 24 MONTHS \$11,500

#### WISCONSIN STATE UNIVERSITY, SUPERIOR

MEYER. FRANK H; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PRO-GRAM (Y010447); 24 MONTHS \$5,800

#### WYOMING

#### UNIVERSITY OF WYOMING

PEPIN. THEODORE JOHN; INSTRUCTIONAL SCIENTIFIC EQUIPMENT PROGRAM (Y010\*61); 24 MONTHS \$10,000

#### GRADUATE LEVEL

#### CALIFORNIA

#### CALIFORNIA STATE COLLEGE AT SONOMA

BENKO, PAUL V; PROMOTING PUBLIC UNDERSTANDING OF SCIENCE THROUGH ENVIRONMENTAL EDUCATION (MG1980); 15 MONTHS \$51,100

#### STANFORD UNIVERSITY

RUBIN, DAVID M; STUDY ON MASS MEDIA COVERAGE OF ENVIRON-MENTAL PROBLEMS (2001)11 001); 4 MONTHS \$1,000 DUNN, DONALD A; CREATION OF A TESTBED FOR INNOVATIVE EDU-

CATIONAL TV EXPERIMENTS (Z002557); 12 MONTHS \$99,490

#### UNIVERSITY OF CALIFORNIA, BERKELEY

KING, C JUDSON; GRADUATE PROGRAM IN CHEMICAL PROCESS DESIGN AND ENGINEERING (2000773 002); 12 MONTHS \$23,220

TANNENBAUM, PERCY H; INTERDISCIPLINARY GRADUATE PRO-GRAM IN POLICY ANALYSIS (Z0025C9); 18 MONTHS \$101,900

#### UNIVERSITY OF CALIFORNIA, LOS ANGELES

LIBBY, WILLARD F; DOCTORAL PROGRAM IN ENVIRONMENTAL SCIENCE AND ENGINEERING (2009269); 12 MONTHS \$198,655

KERNAN, CERARD; INTERDISCIPLINARY STUDENT-ORIGINATED RESEARCH TRAINING- PLANNING FOR METEOROLOGICAL AND POLLUTANT MEASUREMENT NETWORKS IN CALIFORNIA (2002213); 17 MONTHS \$22,550

#### UNIVERSITY OF CALIFORNIA, SANTA BARBARA

JACCARINO, VINCENT; MASTERS DEGREE PROGRAM IN SCIENTIFIC INSTRUMENTATION (2002276); 24 MONTHS \$117,150

#### COLORADO

#### THORNE ECOLOGICAL INSTITUTE

WILLARD, BEATRICE E. AND OAKLEIGH, THORNE II; PARTIAL SUP-PORT FOR SEMINAR ON ENVIRONMENTAL ARTS AND SCIENCES (M034065); 12 MONTHS \$15,000

#### UNIVERSITY OF COLORADO

BARNES, FRANK 3: AN INTERDISCIPLINARY EDUCATION PROGRAM IN TELECOMMUNICATIONS (Z002171 001); 12 MONTHS \$50,300

#### UNIVERSITY OF DENVER

YEGGE, ROBERT B; MASTER OF SCIENCE IN LAW AND SOCIETY DEGREE (Z002271); 12 MONTH3 \$50,080

YEGGE, ROBERT B; MASTER OF SCIENCE IN LAW AND SOCIETY DEGREE (Z002271 001); \$14,126

#### DISTRICT OF COLUMBIA

NONE; OTHER PROGRAM AWARDS (01AWDS); \$611

#### AMERICAN ASSOCIATION FOR ADVANCEMENT SCIENCE

BEVAN, WILLIAM; EXCHANGE OF SCIENTISTS WITH THE ALL-UNION SOCIETY 'ZNANIYE' U.S.R. (F031825\*); 36 MONTHS \$16,060

BUTLER, JAMES C; SCIENCE '11. A REPORT TO THE NATIO (MOJI44); 8 MONTHS \$25,000

BUTLER, JAMES C: SCIENCE '11- A REPORT TO THE NATION AUGI ICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE (MOSIL 001): 1 MONTHS \$2,470

BUTLER, JAMES C; COMMUNICATIONS PROGRAMS IN THE PUBLI UNDERSTANDING OF SCIENCE AND TECHNOLOGY (MOSSESS); MONTHS \$150,000

#### AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES

OLIVE, JOHN R; SECOND NATIONAL BIOLOGICAL CONGRES (BOSISETS); 12 MONTHS \$10,000

#### CENTER FOR GOVERNMENTAL STUDIES

FREDERICKSON, 'H GEORGE; PREPARATION OF EDUCATIONA MATERIALS ON PUBLIC POLICY, ADMINISTRATION, AND URBA NEIGHBORHOODS (2004270); 12 MONTHS \$44,660

#### CORPORATION FOR PUBLIC BROADCASTING

RUBIN, PHILIP A; FILM ON CABLE TELEVISION (1032:81\*); 6 MONT! \$5,000

#### D C CNCL ENGINEERING & ARCHITECTURAL SOC INC

MORAN, DAVID H; TELEVISED FORUMS ON TECHNOLOGY AN SOCIETY (MOST607): 7 MONTHS \$12,500

#### FEDERAL CITY COLLEGE

SAVITZ, MAXINE L; SCIENCE MOBILE LABORATORY PROJECT FC DISTRICT OF COLUMBIA SCHOOLS AND COMMUNITY (WOODS 49 001°); MONTHS \$18.176

#### GEORGE WASHINGTON UNIVERSITY

LOGSDON, JOHN M; SCIENCE, TECHNOLOGY AND PUBLIC POLIC (S034904°); 86 MONTHS \$64,900

#### GEORGETOWN UNIVERSITY

RAMEY, ESTELLE R; SEMINAR SERIES- PUBLIC POLICY AND TH DIRECTION OF AMERICAN SCIENCE AND TECHNOLOGY (MO29818 001), MONTHS \$5,000

#### GREATER WASHINGTON EDUCATIONAL TV ASSOCIATION

NEWMAN, ROBERT; DOCUMENTARY PROFILES OF CONTEMPORAL AMERICAN SCIENTISTS, (MOSEISS); 6 MONTHS \$4,800

#### SCIENCE SERVICE INC

SHERBURNE, E; GENERAL SUPPORT GRANT TO SCIENCE SERVIC (M028750 001); 12 MONTHS \$100,000

NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL KELLY, WILLIAM C; PARTIAL SUPPORT OF THE NATIONAL BOAR ON GRADUATE EDUCATION (CS10222); 12 MONTHS \$50,000

#### **ADISOJR**

#### FLORIDA ATLANTIC UNIVERSITY

SCHEIDELL, JOHN M; AN EXPERIMENT IN THE USE OF TIME SHA ING FOR STRENGTHENING GRADUATE EDUCATION IN ECONOMIC AND THE OTHER SOCIAL SCIENCES (Z002275); 12 MONTHS \$42,455

#### GEORGIA

#### **EMORY UNIVERSITY**

DOBY, JOHN T; EXPERIMENTAL PLANNING-RETRAINING PROJEC FOR THE REORIENTATION OF SCIENTISTS AND TECHNOLOGIST (Z002254); 3 MONTHS \$51,220

LESTER, CHARLES T; EXPERIMENTAL PLANNING-RETRAININ PROJECT FOR THE REORIENTATION OF SCIENTISTS AND TECHNOL GISTS (Z002254 001\*); 6 MONTHS \$0

#### GEORGIA INSTITUTE OF TECHNOLOGY

PARSONSON, PETER S; TRAINING AIDS IN TRAFFIC-SIGNAL E. GINEERING (Z002581); 15 MONTHS \$49,960

#### GEORGIA STATE UNIVERSITY

HADLEY, JOSEPH H; STRENGTHENING OF GRADUATE INSTRU TIONAL PROGRAM IN PHYSICS (2001800 001); 13 MONTHS \$38,140

#### HAWAII

#### UNIVERSITY OF HAWAII

HARRENSTEIN, HOWARD P; ENVIRONMENTAL CONFERENCES C THE PUBLIC UNDERSTANDING OF SCIENCE FOR HAWAII (MOS 1034); MONTHS \$43,100

#### ILLINOIS

#### UNIVERSITY OF ILLINOIS AT CHICAGO CIRCLE

LIPSON, JOSEPH; ALTERNATIVE DOCTORAL PROGRAM IN SCIENCE EDUCATION (2002584); 89 MONTHS \$114,956

#### UNIVERSITY OF ILLINOIS AT URBANA

UMPLEBY, STUART A; SOCIAL CYBERNETICS AND COMPUTE. BASED COMMUNICATIONS MEDIA (2002538); 14 MONTHS \$28,110



#### MICHIGAN

#### MICHIGAN STATE UNIVERSITY

ENKE, CHRISTIE O; INTERDISCIPLINARY PROGRAM IN SCIENTIFIC INSTRUMENTATION (2008297): 30 MONTHS \$86,720

#### WESTERN MICHIGAN UNIVERSITY

MANIS, JEROME G; THE URBAN COMMUNITY AS LAB AN APPROACH TO THE SCI STUDY/SOC PROBLEMS (Z002298); 18 MONTHS \$14,980

#### MISSOURI

#### ST LOUIS AQUACENTER INC

KENDALL, HENRY C; FEASIBILITY STUDY ON CONVERSION OF SPANISH PAVILION TO AN AQUARIUMIECOLOGY COMPLEX (MOSISIAI); 18 MONTHS \$15,500

#### UNIVERSITY OF MISSOURI, COLUMBIA

STEPHENSON, WILLIAM; SEMINAR SERIES ON SCIENCE FOR NEWS EDITORS (MOSISSIS); 9 MONTHS \$50,000

#### NEW YORK

#### AMERICAN INSTITUTE OF PHYSICS

SLACK, LEWIS; FILM PRODUCTION IN PHYSICS AND ASTRONOMY (MOSOSSS); 12 MONTHS \$64,900

SLACK, LEWIS; FILM PRODUCTION IN PHYSICS AND MEDICINE (MOSOSSS 001): 8 MONTHS \$29,900

#### AUDIO PRODUCTIONS

MOONEY, PETER J; SEARCH ENCOUNTERS WITH SCIENCE (C664000 00%); 3 MONTHS \$1,000

MOONEY, PETER J; AMENDMENT OF CONTRACT NSF C664 (C664000 00J): 45,000

#### CITY UNIVERSITY OF NEW YORK SYSTEM OFFICE

HAYWARD, D GEOFFREY: INTERDISCIP STUD ORIG RESCH TRNG PROBLEM SOLVING IN URBAN PLAYGROUNDS (2004564); 6 MONTHS \$21,790

#### **NEW YORK UNIVERSITY**

LANDIS, FRED: DEVELOPMENT OF A COOPERATIVE GRADUATE PROGRAM IN ENGINEERING AND PUBLIC ADMINISTRATION (ZOOM14); 24 MONTHS \$19,615

#### QUEENS COLLEGE

MAZIN, GEORGE; POPULATION DENSITY AND SOCIAL PATHOLOGY IN SELECTED AREAS OF NEW YORK CITY (Y009659\*); 12 MONTHS \$4,260

#### ROCKEFELLER UNIVERSITY

KONE, EUGENE H; BASIC RESEARCH AND HUMAN WELFARE (MOSISAI): 9 MONTHS \$99,000

#### STATE UNIVERSITY AT BUFFALO

MARTENS, HINRICH R; A NEW PROGRAM IN MECHANICAL EN-GINEERING DESIGN (2004/99); 24 MONTHS \$91,705

#### UNITED ENGINEERING TRUSTEES

SHAW, MILTON C; PARTIAL SUPPORT OF A CONFERENCE ON MAK-ING GRADUATE ENGINEERING MORE RELEVANT TO INDUSTRIAL NEEDS (Z00366); 6 MONTHS \$2,500

#### ОНЮ

#### BATTELLE MEMORIAL INSTITUTE

TRESSEL, GEORGE W; FILMED REPORT ON THE 'STATE OF SCIENCE' (MOSINES); 5 MONTHS \$53210

#### PENNSYLVANIA

#### PENNSYLVANIA STATE UNIVERSITY

FUNKHOUSER, G RAY: WORKSHOP ON THE GOALS AND METHODS OF ASSESSING THE PUBLIC'S UNDERSTANDING OF SCIENCE (MOSSOSS); 6 MONTHS \$17,500

#### UNIVERSITY OF PITTSBURGH

BELZER, JACK; STUDY AND WORKSHOP ON CURRICULUM DEVELOP. MENT IN INFORMATION SCIENCE (2008345); 18 MONTHS \$25,320

#### TENNESSEE

#### TENNESSEE TECHNOLOGICAL UNIVERSITY

MARTIN, ROBERT E; TECH AQUA PROJECT (Y007679 001\*); \$10,150

#### WASHINGTON

#### UNIVERSITY OF WASHINGTON

WENK, EDWARD JR; SOCIAL MANAGEMENT OF TECHNOLOGY (Q000000 001°); 15 MONTHS \$28,000

# PLANNING AND POLICY STUDIES AND INTERGOVERNMENTAL SCIENCE PROGRAMS

#### CALIFORNIA

STANFORD UNIVERSITY

DUNN, D. A. PARKER, E. B. AND ROSSE, J. N. COMMUNICATIONS TECHNOLOGY AND PUBLIC POLICY (SOSJESS): 12 MONTHS \$104,200 DUNN, D. A. PARKER, E. B. AND ROSSE, J. N. COMMUNICATIONS TECHNOLOGY AND PUBLIC POLICY (SOSJESS) 201), \$2,300

#### COLORADO

NONE; OTHER PROGRAM AWARDS (01AWDS); \$2,500

#### DISTRICT OF COLUMBIA

NONE: OTHER PROGRAM AWARDS (OLAWDS); \$7,805

AMERICAN PSYCHOLOGICAL ASSOCIATION

COOK, STUART W; ETHICAL STANDARDS FOR PSYCHOLOGICAL RESEARCH (SOJJOD); & MONTHS \$5,500

#### AUTOMATED SYSTEMS CORPORATION

MORRISON, HOWARD I; SURVEY SYSTEM TASK ORDER AMENDMENT FOR: PHASE II, UNIVERSITY (CS76010 002); I MONTHS \$3,511 MORRISON, HOWARD I; CASE MODULE 4, PHASE 1, NSF-C681, T.O. 5 (THIS IS A FIXED-PRICE CONTRACT) (C684005); 3 MONTHS \$12,361

#### **BROOKINGS INSTITUTION**

BROWN, SEVOM, AND FABIAN, LARRY L; THE IMPACT OF TECHNOLOGICAL CHANGE ON AMERICAN FOREIGN POLICY AND IN-TERNATIONAL ORGANIZATIONS (SOLIDOI X00): 12 MONTHS \$124,800

#### GENERAL SERVICES ADMINISTRATION

PERDUE, JOHN; PROGRAMMING SERVICES FOR 'EARNED DEGREES CONFERRED' PROJECT INTERAGENCY AGREEMENT NO. WITH GSA (CA77001); 2 MONTHS \$10,003

#### GEORGE WASHINGTON UNIVERSITY

LOGSDON, JOHN M. SCIENCE, TECHNOLOGY AND PUBLIC POLICY (SOLIDOP'); 36 MONTHS \$52,000

#### NSF CONTRACTS

; DEGREE DATA IN THE ITRF (C684004), 2 MONTHS \$1,943

JOHNS HOPKINS UNIVERSITY-SCHOOL OF ADVANCED

INTERNATIONAL STUDIES

OSGOOD, ROBERT E: UNITED STATES OCEAN POLICY PROJECT (SOJI264): 12 MONTHS \$86,900

#### ILLINOIS

#### NORTHWESTERN UNIVERSITY

RUBENSTEIN, ALBERT H; A STUDY OF FACTORS UNDERLYING THE INTERNATIONAL TECHNOLOGICAL COMPETITIVENESS AND R & D PRODUCTIVITY OF U.S. FIRMS (SOJJJSJ); 12 MONTHS \$10,200

#### INDIAN

#### INDIANA UNIVERSITY, BLOOMINGTON

MULLINS, NICHOLAS C; THE STRUCTURE OF THE FEDERAL SCIENCE ADVISING SYSTEM (SOJ2769); 24 MONTHS \$49,600

#### MARYLAND

NONE; OTHER PROGRAM AWARDS (GLAWDS); \$2,125

#### MASSACHUSETTS

NONE; OTHER PROGRAM AWARDS (GJAWDS); \$5,915

#### HARVARD UNIVERSITY

PRICE, DON K; SCIENCE AND PUBLIC POLICY (SOSSOST); 12 MONTHS

## MASSACHUSETTS INSTITUTE OF TECHNOLOGY

ODONI, AMEDEO; DOCTORAL DISSERTATION RESEARCH ON SCIENCE POLICY (SGJ1928); 12 MONTHS \$2,800

## SCIENCE AND PUBLIC POLICY STUDIES GROUP

SKOLHIKOFF, EUGENE B; SCIENCE AND PUBLIC POLICY STUDIES GROUP-TRANSITIONAL SUPPORT (SOLIISS); 24 MONTHS \$16,000

#### MICHIGAN

#### UNIVERSITY OF MICHIGAN

CHEN, KAN; POLICY RESEARCH ON POPULATION AND ENVIRON. MENT (SQ1632); 12 MONTHS \$67,600

#### NEW YORK

#### COLUMBIA UNIVERSITY

MERTON, ROBERT K; THE SOCIOLOGY OF SCIENCE (SOIJISS X00°): 12 PONTHS \$40,000

#### OKLAHOMA

#### UNIVERSITY OF OKLAHOMA

WHITE, IRVIN L; DOCTORAL DISSERTATION RESEARCH ON SCIENCE POLICY (S035069); 12 MONTHS \$2,300

#### VIRGINIA

## NONE; OTHER PROGRAM AWARDS (01AWDS); \$2,500

# APPLIED DATA RESEARCH INC-PRINCETON-APPLIED DATA RESEARCH - WASHINGTON

HOLMBURG, DALE L; TASK ORDER FOR COMPUTER PROGRAMS FOR CASE REPORTING SYSTEMS HODULES I, 2, AND 3, APPLIED DATA RESEARCH, INC. NSF-Cest T.O. I (Cestoo); I MONTHS 16,762 HOLMBURG, DALE L: CASE MODILE; A DATA RESEARCH.

HOLMBURG, DALE L; CASE MODULE 4, PHASE II, NSF-C66J, T.O. NO. (C68J00J); 2 MONTHS \$9275

## UNIVERSITY OF VIRGINIA-GEORGE MASON COLLEGE

KREILKAMP, KARL; RESEARCH IN THE THEORY OF SCIENCE POL-ICY (SO32103), 9 MONTHS \$17,500

#### WASHINGTON

#### UNIVERSITY OF WASHINGTON

WENK, EDWARD JR; SOCIAL MANAGEMENT OF TECHNOLOGY (Q000001 001°); IS MONTHS \$86,300

# STUDIES OF SCIENTIFIC AND TECHNICAL MANPOWER RESOURCES

#### DISTRICT OF COLUMBIA

NONE; OTHER PROGRAM AWARDS (GIAWDS): \$5,161

#### AMERICAN COUNCIL ON EDUCATION

BAYER, ALAN E, AND CREAGER, JOHN A; A PLANNING PROGRAM FOR CONTINUING STUDIES OF RECENT ENTRANTS TO SCIENCE AND ENGINEERING (C141000); 8 MONTHS \$49,375

#### BUREAU OF LABOR STATISTICS

MOORE, GEOFFREY H; EMPLOYMENT OF SCIENTISTS AND EN-GINEERS 1950-1970 (CA78000); 12 MONTHS \$35,000



MOORE, QEOFFREY H; THE IMPACT OF FEDERAL EXPENDITURES AND PROGRAMS ON SCIENTIFIC AND TECHNICAL EMPLOYMENT REQUIREMENT (CASSOOS), 12 MONTHS \$100,000

#### IMMIGRATION & NATURALIZATION SERVICE

LOUGHRAN, E A: REQUEST FOR PUNCH CARDS CONTAINING DATA RELATING TO IMMIGRANTS ADMITTED IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKERS GROUP AND NONIMMIGRANT TABULLTIONS FOR FY 1971 (CA71000): 6 MONTHS 2100

#### NATIONAL PLANNING ASSOCIATION

LECHT. LEONARD A, AND SKAGOS, ALLEN H; ASSESSING THE IM-PACT OF CHANGES IN NATIONAL PRIORITIES FOR THE UTILIZATION OF SCIENTISTS AND ENGINEERS IN THE 1970'S (ROSSIGE); 9 MONTHS 873 8928

#### NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL

SOLDZ, HERBERT; TASK ORDER FOR AN EXPLORATORY STUDY CON-CERNING A COMPREHENSIVE FILE ON SCIENCE AND ENGINEERING DOCTORATES (C31024); 4 MONTHS \$32,800

KELLY. W C; DEVELOPMENT OF A COMPREHENSIVE ROSTER OF DOCTORATES IN THE SCIENCES AND ENGINEERING (C410849); 9 MONTHS \$176,090

#### MARYLAND

#### BURBAU OF THE CENSUS

BROWN, GEORGE; PROCESSING OF DATA FOR THE 1970 POSTCENSAL STUDY OF SCIENTIFIC, ENGINEERING, AND TECHNICAL MANPOWER (CAS2000 001); 12 MONTHS \$183.000

WEITZMAN, MURRAY S. DEVELOPING A SCIENCE AND ENGINEER-ING MANPOWER DATA SYSTEM (CA88000), 5 MONTHS \$176,000

#### YIRGINIA

NONE: OTHER PROGRAM AWARDS (OFAWDS): \$492

#### STUDIES OF EDUCATION AND RESEARCH INSTITUTIONS

#### DISTRICT OF COLUMBIA

NONE; OTHER PROGRAM AWARDS (ORAWDS); \$1,224

AMERICAN COUNCIL ON EDUCATION

BLANDFORD, BARBARA; HIGHER EDUCATION PANEL (R000099 002); 12 MONTHS \$40,000

#### EXOTECH SYSTEMS INC

EHRMAN, LIBERT; PREPARATION OF A SERIES OF TABLES SHOW-ING INFORMATION ON TRAINEESHIP DEPARTMENTAL DATA (C43:017); B MONTHS \$9.688

NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL CUNNINGHAM, CLAREBETH M; DOCTORATE SURVEY (CJ10082 008): 12 MONTHS \$11.850

#### NEW JERSEY

#### EDUCATIONAL TESTING SERVICE

BOLDT. ROBERT F; TRENDS IN APTITUDES OF GRADUATES IN SCIENCE (C710000); 4 MONTHS \$13,425

# STUDIES OF PUBLIC AND PRIVATE FUNDING OF SCIENCE AND TECHNOLOGY

#### DISTRICT OF COLUMBIA

NONE; OTHER PROGRAM AWARDS (08AWDS); \$28,307

#### NATIONAL PLANNING ASSOCIATION

TERLECKYJ, NESTOR E; STUDY OF THE RELATIONSHIPS BETWEEN RESEARCH AND DEVELOPMENT AND PRODUCTIVITY GROWTH OF INDUSTRIES (ROSSIS): 12 MONTHS \$35,200

#### MARYLAND

#### BURBAU OF THE CENSUS

GRETTON, OWEN; ANNUAL SURVEY OF RESEARCH AND DEVELOP-MENT IN AMERICAN INDUSTRY (CA04000 004); 12 MONTHS \$85,000

#### **NEW YORK**

WRIGHT, ROBERT R: OTHER PROGRAM AWARDS (01AWDS): 12 MONTHS \$46,000

#### NATIONAL BUREAU OF ECONOMIC RESEARCH

GRABOWSKI, HENRY G; THE RETURNS TO FIRM INVESTMENT OUT-LAYS ON RESEARCH AND DEVELOPMENT, PLANT AND EQUIPMENT, AND ADVERTISING (ROJINO); 18 MONTHS \$47,900

#### NATIONAL INDUSTRIAL CONFERENCE BOARD INC.

CREAMER, DANIEL: MAGNITUDE AND CHARACTERISTICS OF IN-DUSTRIAL RAD SPENDING ABROAD BY U.S. FIRMS (ROSSING); 9 MONTHS

#### VIRGINIA

NONE: OTHER PROGRAM AWARDS (OJAWDS); \$1,584

# STUDIES OF INTERACTIONS OF SCIENCE AND TECHNOLOGY WITH SOCIETY

#### CONNECTICUT

#### THE FUTURES GROUP

GORDON, THEODORE J; DESIGN, EXECUTION, AND ANALYSIS OF A DELPHI STUDY (C138000); 4 MONTHS \$14719

#### INTERGOVERNMENTAL SCIENCE PROGRAMS

#### ALABAMA

#### AUBURN UNIVERSITY

RAINER, REX K JR. AND MOORE, RAYMOND K; APPLICATION OF INTER-DISCIPLINARY UNIVERSITY RESOURCES TO LOCAL GOVERNMENT PROBLEMS (T0J4705); 6 MONTHS \$25,000

#### CAUFORNIA

#### COUNCIL ON INTERGOVERNMENTAL RELATIONS

FRANKUM, RONALD, LIPSON, ALBERT, AND LIPSON, ALBERT; STATE
OF CALIFORNIA - RAND SCIENCE AND TECHNOLOGY PROJECT
(TOJ3957); 12 MONTHS \$65,000

#### COLORADO

#### WESTERN INTERSTATE NUCLEAR BOARD

WHATLEY, ALFRED T; TECHNOLOGY ASSESSMENT OF THE PLOWSHARE PROGRAM (TOSSOLI OCI); 12 MONTHS \$25,000

#### CONNECTICUT

#### **FAIRFIELD UNIVERSITY**

GOLDMARK, PETER C; INTERSTATE LIAISON WITH NEW RURAL SOCIETY PROJECT (TOJJS07); 12 MONTHS \$16,000

#### DELAWARE

#### UNIVERSITY OF DELAWARE

GAITHER, WILLIAM S; DELAWARE STUDY ON MARINE AND COASTAL AFFAIRS (TOJIJET); 3 MONTHS 47,500

#### DISTRICT OF COLUMBIA

NONE; OTHER PROGRAM AWARDS (HAWDS): \$22,779

#### AMERICAN REVOLUTION BICENTENNIAL COMMISSION

HULCHER. WENDELL E; KEY ASPECTS OF AMERICAN FEDERALISM (T000001\*); 6 MONTHS \$10,000

#### AMERICAN SOCIETY FOR PUBLIC ADMINISTRATION

HENRY, LAURIN L; PUBLIC SCIENCE POLICY-ADMINISTRATION CONFERENCE (TOJIO59); 6 MONTHS \$4,000

#### CORPORATION FOR PUBLIC BROADCASTING

RUBIN, PHILIP A; FILM ON CABLE TELEVISION (IGJ2184\*); 6 MONTHS \$40,000

#### NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

BLOMEYER, LLOYD; A PILOT DEMONSTRATION PROJECT OF TECHNOLOGY APPLICATION FROM AEROSPACE INDUSTRY TO CITY MANAGEMENT (CASSOOD 001); \$28,900

NEWLAN, IRL E; RANN COMMUNICATIONS PROGRAM (CA85000); 6 MONTHS \$5,000

#### NATIONAL LEAGUE-CITIES/US CONFERENCE OF MAYORS

DAVIS, ROSS D; MUNICIPAL INVOLVEMENT IN BROADBAND CABLE COMMUNICATIONS (TOJ1901); 12 MONTHS \$25,000

#### PUBLIC TECHNOLOGY INC

HAVLICK, J ROBERT; TO DESIGN A LOCAL GOVERNMENT SOFTWARE CLEARINGHOUSE (JOSSI26\*): 10 MONTHS \$5,000

#### UNIVERSITY OF NEW HAMPSHIRE, DURHAM

FAIMAN, ROBERT N: CONFERENCE ON THE UNIVERSITY AS A RESOURCE IN THE SOLUTION OF NATIONAL PROBLEMS (TOJI461); 12 MONTHS \$30,300

#### URBAN INSTITUTE

HATRY, HARRY P; PUBLICATION OF THE PROCEEDINGS OF THE SEMINAR ON APPLICATION OF SCIENCE AND TECHNOLOGY TO LOCAL GOVERNMENTS (7000017 001); 6 MONTHS \$3,160



NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL DAVID, HENRY, STUDY CONFERENCE ON SOCIAL AND BEHAVIORAL SCIENCE (CITOTSO): 12 MONTHS \$41,300

#### GEORGIA

GRORGIA OFFICE OF THE GOVERNOR

MOCK, JOHN E; GEORGIA RESEARCH PRIORITIES STUDY (TOJJ307), 12 MONTHS \$28,000

#### HAWAII

HAWAII DEPT OF PLANNING & ECONOMIC DEVELOPMENT

MARK, SKELLEY M; STATE SCIENCE AND TECHNOLOGY FORECASTING PROGRAM (Topopas 001): 12 MONTHS 221,300

#### YENTUCKY

COUNCIL OF STATE GOVERNMENTS

CRIMFIELD, BREVARD, ROLE OF FEDERAL LABORATORIES IN STATE PUBLIC TECHNOLOGY (ROCCOTT COST), 6 MONTHS \$10,760

NATL AREA DEV INST OF SPINDLETOP RESEARCH INC-NATIONAL AREA DEV INST OF SPINDLETOP RES INC

LESLIE, JOHN D; CONFERENCE SERIES ON BALANCED GROWTH (TOJISII): 12 MONTHS \$30,000

#### MARYLAND

NONE; OTHER PROGRAM AWARDS (GIAWDS): \$1,067

#### MASSACHUSETTS

MASSACHUSETTS DEPARTMENT OF COMMUNITY AFFAIRS

UNGERER, RICHARD A: INTERNSHIP IN PUBLIC POLICY (Tooods); 14
MONTHS 826-500

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

LITTLE, J. D. C., AND STEVENS, CHANDLER H; CITIZEN FEEDBACK AND OPINION FORMULATION (TO00016 001), 7 MONTHS \$15,000

MASSACHUSETTS SCIENCE & TECHNOLOGY FOUNDATION

BARTON, ROBERT S; TECHNOLOGY EXCHANGE (T000019 001\*); 12 MONTHS \$13,700

#### MINNESOTA

MINNESOTA STATE PLANNING AGENCY

BODDY, FRANK, AND HUNTER, A EDWARD; A STATE COUNCIL OF ECONOMIC ADVISERS (TO14915); 6 MONTHS \$23,500

#### **NEW YORK**

AMERICAN INSTITUTE OF AERONAUTICS& ASTRONAUTICS

GREY, JERRY, AND FOX, HERBERT; APPLICATIONS OF TECHNOLOGY IN URBAN SETTINGS (TOJJOSJ): 12 MONTHS \$22,700

NEW YORK STATE ASSEMBLY

DURYEA, PERRY B IR, AND CHAPMAN, SEVILLE; NEW YORK AS-SEMBLY SCIENTIFIC STAFF SUPPORT (TOJJ167); 12 MONTHS \$56,100

#### ОНЮ

OHIO DEPARTMENT OF DEVELOPMENT

GABER, NORMAN H, AND HIGGS, LOUIS; SYMPOSIUM TO DEVELOP AN R&D AGENDA FOR OHIO (TOJIAN): 6 MONTHS \$6,100

SWEET, DAVID C: RESEARCH AND DEVELOPMENT PLAN FOR THE STATE OF OHIO (TO34578): 12 MONTHS \$20,000

OHIO STATE UNIVERSITY

BURGESS, PHILIP M. AND HIGGS, LOUIS D; DESIGN AND DEVELOP-MENT OF A PLANNING AND DECISION INFORMATION SYSTEM (PDIS) IN PUERTO RICO (T000040); 6 MONTHS 124,000

#### OKIAHOMA

OKLAHOMA STATE UNIVERSITY

HANEMAN, Y S JR; APPLICATION OF INTERDISCIPLINARY UNIVER-SITY RESOURCES TO LOCAL GOVERNMENT PROBLEMS (TO34670); 5 MONTHS \$33.300

UNIVERSITY OF OKLAHOMA

REID, GEORGE W; GOVERNOR'S CONFERENCE ON R&D PRIORITIES FOR OKLAHOMA (TOJ2804); 6 MONTHS \$6,500

REID, GEORGE W; STUDY OF R&D COMMUNICATION LINKAGE PROBLEMS IN OKLAHOMA (T032804 001); 3 MONTHS \$9,000

#### OREGON

OREGON STATE UNIVERSITY

ALEXANDER, R M, AND CANNON, KESSLER R; SCIENCE ADVICE TO OF TE GOVERNMENT (T0000)4 001); 12 MONTHS \$26,850

#### PENNSYLVANIA

PENNSYLVANIA SCIENCE AND ENGINEERING FON

FOX, THOMAS O, AND LAUGHLIN, ROBERT D; A NATIONAL ACTION CONFERENCE (TOLISTS), 12 MONTHS \$26,900

LAUGHLIN, ROBERT D; AN EXPERIMENTAL EXPANSION OF THE PENNTAP TECHNICAL FIELD SERVICES TO SERVE LOCAL GOVERNMENT (TOJSO10); 12 MONTHS \$33200

PENNSYLVANIA STATE UNIVERSITY

FELLER, IRWIN; CENTER FOR THE STUDY OF SCIENCE POLICY (TOJ \$66); 12 MONTHS \$63,500

PHILADELPHIA-OFFICE OF THE MAYOR

RIZZO, FRANK L; SUPPORT FOR ESTABLISHMENT OF SCIENCE AND TECHNOLOGY ADVISORY COUNCIL FOR THE CITY OF PHILADELPHIA (TOJ 1379); 12 MONTHS 142300

#### PUERTO RICO

PUERTO RICO INSTITUTE OF SOCIAL TECHNOLOGY

SLATER, LLOYD E; GOVERNOR'S WORKSHOP ON R&D PRIORITIES FOR PUBLIC SERVICE IN PUERTO RICO (TO34718); 13 MONTHS \$14,200

#### SOUTH DAKOTA

SOUTH DAKOTA STATE PLANNING AGENCY

MUCHMORE, LYNN; SOUTH DAKOTA ACADEMIC RESOURCES COUN-CIL (T034580); 12 MONTHS \$25,900

#### TEXAS

TEXAS MUNICIPAL LEAGUE

FLOYD, JACKSON B; URBAN TECHNOLOGY SEMINAR (TOJJTON); 6 MONTHS \$4,000

UNIVERSITY OF HOUSTON

ERELI, ELIEZER; ANALYZING COASTAL AND MARINE LAW TO DEVELOP AN AUTHORITY FOR COASTAL ZONE MANAGEMENT (1000024 001); 6 MCNTHS \$24,900

#### WASHINGTON

CITY OF TACOMA, WASHINGTON

DONALDSON, WILLIAM V; TECHNICAL INTEGRATION INTO CITY OPERATIONS (TOJ4903): 12 MONTHS \$35,000

DONALDSON, WILLIAM V: TECHNICAL INTEGRATION INTO CITY OPERATIONS (TOJ490J 001): 12 MONTHS \$33,000

BATTELLE MEMORIAL INSTITUTE-BATTELLE NORTHWEST

RASMUSSEN, JOHN E, AND HAYES, FRED O'R; CONFERENCE ON RESEARCH CENTERS FOR STATE AND LOCAL GOVERNMENTS (TOJ2805); 6 MONTHS \$25,000

#### STUDIES OF SCIENCE POLICIES AND PROGRAMS

#### DISTRICT OF COLUMBIA

JOSEPH FROOMKIN INC

ENDRISS, JACK: ADDITIONS AND IMPROVEMENTS TO THE NSF ALLOCATION AND IMPACT MODEL (C118000); 4 MONTHS \$15,000

NATIONAL ACADEMY OF ENGINEERING

NAFTALIN, MICAH H; A CONTINUING REVIEW BY THE COMMITTEE ON PUBLIC ENGINEERING POLICY OF THE ENGINEERING NEEDS OF THE U.S. AS WELL AS OF THE APPLICATION OF ENGINEERING TO CRITICAL PUBLIC PROBLEMS (CJ101J4 005); 9 MONTHS \$111,865

NATIONAL ACADEMY OF SCIENCES

GREEN, ROBERT E; SUPPORT OF THE COMMITTEE ON SCIENCE AND PUBLIC POLICY (CJ10027 009); 12 MONTHS \$78,000

**OPINION RESEARCH CORPORATION** 

MASON. FRED M; COLLECTION AND ANALYSIS OF DATA WITH RESPECT TO THE ATTITUDES OF THE GENERAL PUBLIC TOWARDS SCIENCE AND TECHNOLOGY (C744000): 1 MONTHS \$14,000

NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL DOW, RICHARD Y; SUPPORT OF COMMITTEE ON RADIO FREQUENCIES (CJ1002J 01J); 12 MONTHS \$12,000

GREGORY, BRUCE N; STUDY OF PRIORITIES IN ASTRONOMY (Calolifo 063): 12 MONTHS \$16,000

WOOD, GEORGE W; PARTIAL SUPPORT FOR A STUDY OF NUCLEAR PHYSICS AND THE PLANNING OF A PROSPECTIVE PHYSICS SURVEY (C110172 003); 6 MONTHS \$25,000

#### ILLINOIS

COMPUTER HORIZONS INC

NARIN, FRANCIS: EXPLORATION OF THE POSSIBILITY OF GENERATING IMPORTANCE AND UTILIZATION MEASURES BY CITATION INDEXING OF APPROXIMATELY 15G JOURNALS IN THE PHYSICAL SCIENCES (C617000 001); 12 MONTHS \$60,145

HARIN, FRANCIS, CONTRACT FOR EXPLORATION OF THE POSSIBILI-TY OF GENERATING IMPORTANCE AND UTILIZATION MEASURES BY CITATION INDEXING OF APPROXIMATELY 450 JOURNALS IN THE PHYSICAL SCIENCES (C447000 004); 8 MONTHS \$95,841

#### MASSACHUSETTS

NONE: OTHER PROGRAM AWARDS (ORAWDS): \$500

MARGACHUSETTS INSTITUTE OF TECHNOLOGY

MCLLOMON, J HERBERT, AND FREEMAN, R. B.; PRELIMINARY EX-MINATION OF PROFESSIONALIMANAGERIAL LABOR MARKETS AMINATION (Q035/13); 40 MONTHS \$27,000

#### **NEW YORK**

STATE UNIVERSITY OF NEW YORK SYSTEM OFFICE

DILLON, JAMES D JR, AND BARRY, CRAIG L; DEVELOPMENT OF A SPONSORIGRANTEE DATA EXCHANGE SYSTEM (QOJIGIA); 12 MONTHS \$10,000

#### PENNSYLVANIA

CARNEGIE-MELLON UNIVERSITY-CARNEGIE INSTITUTE OF TECHNOLOGY

; SUPPORT OF THE AD HOC COMMITTEE FOR THE FOURTH NA-TIONAL SCIENCE BOARD REPORT ON THE ENGINEERING SCIENCES

(C665000 001); 2 MONTHS \$11,000

#### **TEXAS**

RICE UNIVERSITY

PITMAN, RUSSELL H; SUPPORT OF THE AD HOC COMMITTEE FO THE FIFTH NATIONAL SCIENCE BOARD REPORT ON UNDERGRAPH ATE EDUCATION IN THE SCIENCES (C697000): 17 MONTHS \$20,000

#### VIDGINIA

NONE; OTHER PROGRAM AWARDS (GIAWDS); \$2,500

PRC COMPUTER CENTER INC

SULLIVAN, JOHNIE A: DETAILED PROGRAM SPECIFICATIONS FO THE NSF MANAGEMENT INFORMATION SYSTEM (C661000 003); MONTHS \$219,205

PRC DATA SERVICE INC

SULLIVAN, JOHNIE A: CONTRACT FOR MANAGEMENT INFORMA TION SYSTEM REQUIREMENTS STUDY AND CONCEPTUAL DESIG FOR THE NATIONAL SCIENCE FOUNDATION (C66,000 004): 4 MONTH \$85,117

SULLIVAN, JOHNIE A; SYSTEM PROGRAMMING, TESTING, AND II TEGRATION FOR THE NSF MANAGEMENT INFORMATION SYSTE (C661000 001\*); 21 MONTHS \$100,000



# FELLOWSHIP AND TRAINEESHIP AWARDS

Name and Field of Study of Individuals Offered National Science Foundation Fellowships by State of Permanent Residence and Program, Fiscal Year 1972

#### AL ABAMA

BRITT, JEANETTA M.,
Urban & Regional Planning
DOBBS, GARY HIII, Biology, General
DOUGLASS, CHARLES H. IR., Chemistry
HARDAGE, SYLVIA D., Anthropology &
Archeology
KEISTER, BRADLEY D., Physics
STANLEY, HAROLD W., Political Sciencet
TORBERT, ROY B., Physics
WILLIAMS, EDWIN S., Linguistics

ALASKA
PAGE DON N., Physics

#### **ARIZONA**

CALOS, MICHELE P., Zoologyt COOK, MICHAELR., Biochemistry? DAVITT, GREGORY A., Psychology! DUNFORD, CHRISTOPHER I., Biology, General FLOWER, WILLIAM L., Engineering FOLGER, DAVID B., Engineeringt GADWA, PETERT, Mathematics † GILLMORE, WILLIAM A , Sociology ! GRANT, BARBARA D. Chemistry MACDONOUGH, LINDA A , Biology, General? MARX, LAWRENCE J., Mathematics MCMILLAN, WILLIAMP., Engineering MILLER, HAROLD L , JR , Psychology NELSON, ERIC V., Engineering! NEWTON, JAMES W., Psychologyt RUBIN, ROBERT A, Biochemistry SCHWENT, VINCENT L., Physiology WENTINK, LINDA M., Anthropology & Archeology

#### **ARKANSAS**

CHAMBERLIN, CHARLES E., Engineering ENGLES, CHARLES R., Mathematics†
GANNAWAY, JOHN R., Mathematics MAGERS, PAMELA C., Anthropology & Archaelogy
OWENS, JAMES W., Biology, General ROSEBERRY, WILLIAM C., Anthropology & Archaeology†
THOMASSON, WILLIAM M., Engineering

#### CALIFORNIA

ABAD, VICTOR], Mathematics
ADAMS, GEORGE G. Engineering
ADAMS, JOHN Q. Mathematics
ANTOGNINI, JAMES A., Psychology
ASH, AVNER D., Mathematics†
ASMUSSEN. MARJORIE A., Mathematics
AUDESIRK, GERALD J., Physiology
BAILEY, STEPHEN F., Zoology†
BENDOR JONATHAN B., Political Sciencet
BERS CEIN, WILLIAM J., Chemistry
BETHUNE, DONALD S., Physics
BLACKADAR, BRUCE E., Mathematics

BOYLE, EDWARD A , Earth Sciences BRADFORD, JOHN A., Sociology BREITER, DENNIS N. Physics BROWN, MARIAN V. Economics BROWN, PENELOPE, Anthropology & Archaeology BURNS, ELIZABETH X, Geography BUTLER. JAMES P., Biophysics CAMERON, ROBERT A., Biology, General CAMMACK, DAVID A., Engineering CARLSON, CHARLES W., Chemistry CHAMBERS, ANNE V., Anthropology & Archaeologyt CHAI'LIN, STEPHEN J., Biology, General CHAPMAN, RUSSELL L., Bolany CHU, STEVEN, Physics CLARK, STEVEN C., Biochemistryt CLARKE, STEVEN G. Biochemistry COHEN, BRUCE 1, Physics CORDY ROSS H. Anthropology & Archaeologyt DAMICO, WILLIAM A., Biochemistryt DAY, LUCILLE L., Biology, General1 DAY, STEVEN M., Earth Sciences DODSON, STEPHENR, Linguistics? DULLIEN, ROBERT, Engineering! EARDLEY, DOUGLASM, Physics EDWARDS, THOMAS J., Engineeringt ENDLER, JOHN A., Genetics ESTER, MICHAELR, Anthropology & Archaeology FARABAUGH, PHILIPJ., Biochemistryt FAUGHT, WILLIAMS, III, Mathematics FIELD, ALEXANDER J. Economics FISHER, DANIEL C., Earth Sciences FLEISSNER, WILLIAMG, Mathematics FLORA, LAURENCEP, Engineeringt FLYNN, MICHAEL A., Economics FOLEY, TINA D., Anthropòlogy & Archaeologyt FONTANA, ANDREA, Sociologyt FRANK, PAUL D., Mathematics FUTIA, CARLA, Economics GATES, NATHANC, Engineering! GAY, RICHARD L., Engineeringt GECKELER, WILLIAMR, Microbiologyt GEE, KATHLEEN T., Physics GERSTEIN, DEAN R., Sociology GREENBERG, SANFORDN., Political Science GROSS, SHEILA)., Genetics? HAAS, DAVIDE, Sociology HAGER, WILLIAM W., Mathematics HAHN, PETER F., Mathematica HAMILL, WILLIAMD., Jr., Chemistry HANSEN, CHRISTOPHER B., Microbiology HARMELL, CATHY A., Linguistics! HARRIS, ANDREW L., Medical Sciencest HARWOOD, DANEL, Psychology HAWS, STEVEN W., Economics t HAYCOCK, JOHNW., Medical Sciencest HEDDERSON JOHN J., Sociology HENDRICKS, JOHNS., Engineeringt HILL. JESSEK, Astronomy HINNEBUSCH, THOMAS J., Linguistics

HIRVELA, ELSAR., Anthropology & Archeologyt HOCHFELD, PAUL R., Engineeringt HOFFMAN, MEREDITH B, Linguistics HOLEROOK, SALLY J., Biology, General HONG, BENJAMIN, Mathematics HOPKINS, MARK M., Economics HYMOWECH, MARVIN, Mathematics JACOB, JOHN P., Mathematics JACOBS, RODNEY L., Economics JARDIN, STEPHENC., Engineering JOHNSON, DOUGLAS K., Social Science, Other? JOHNSON, LESLIE K., Biology, General JONES, ROBERT E., Biology, Generalt IOURIS, WILLIAM, Anthropology & Archaeology KAWATE, KEITHW., Engineeringt KISKIS, RONALD C., Chemistry KLAR, KATHRYN A., Linguistics KLINGNER, RICHARDE, Engineeringt KNIGHT, DOYLE D., Engineering KOSSLYN, STEPHEN M., Psychology KRANTZ, STEVENG., Mathematics KREMER, MARY G., Psychology KRONENFELD, Richard L., Physics KUNG, LYDIA, Anthropology & Archaeologyt LAGARIAS, JEFFREY C., Mathematics LAMBERT, STEVEN J., Earth Sciences LANDIS, STORY C., Biology, General LAPIDUS, DEBORAHR., Psychologyt LAUER, GAIL D., Genetics † LAZEAR, EDWARDP., Economics LERWICK, STUART N., Mathematics LIEDER, CHARLES A., Chemistry LINDER, JEAN C., Biology General? LIST, STEPHENE, Mathematics? LORD, CATHERINE E., Psychology MARLIAVE, JEFFREY B., Biology, General MASOVER, GERALD K., Microbiology MCBREARTY, JOHN B., Sociology MCCREERY, RICHARD L., Chemistry MCDERMOTT, CHRISTINE E., Biology, Generalt MENDEL, META C., Political Sciencet MENKIN, ELIZABETH S., Biology, General? MENUZ, REX L., Anthropology & Archeologyt MEYERS, MARGARET B., Social Science, Other MINTZ ROBERT E., Sociology MORRIS, LYLE E., Engineering! MRAW, STEPHEN C., Chemistry NEELY, HELEN H., Psychologyt NOVOSELLER, DANIEL E., Physics OBERLAENDER, JACQUELINE, Chemistryt OKRAND, MARC, Linguistics PALMER, STEPHEN E., Psychology PARKS, RAYMOND G, Engineering! PATTERSON, CHARLOTTE !.. Psychologyt PEARSON, PETER K., Chemistry PEARSON, ROBERT B., III, Physics PERCIVAL, FRANKW, Botany PETERSON, BRAIN L., Mathematics† PETERSON, JAMES L., Mathematics

NOTE: All awards are tenable in 1972-1973. Three-year awards are indicated by "1": the second and third years are lenable during any 2 of the following 4 years, subject to the students' satisfactory progress and the availability of funds. Two-year awards are indicated by """. All others are 1-year awards.



PETTI, RICHARD J., Mathematics PHILLIPS, DAVID W., Biology, General POWERS, THOMAS W., Chemistry PUTCHA, MOHAN S., Mathematics RAFFERTY, JAMES M., Psychology RANDLE, JO A., Agriculture† REITMAN, LARRY N., Chemistry RICHARDSON, JEFFREY H., Chemistry RICHMAN, JAMES G., Earth Sciences RICK, JOHN W., Anthropology & Archaeology† ROBERTS, JOHN S., Zoology

ROBERTS, JOHNS, Zoology ROGOFF, BARBARA L, Psychology† ROSKO, LANA, History & Philosophy of

Sciencet ROYLANCE, LYNN M., Engineeringt RYAN, JOSEPHS., JR, Economics SCHEDVIN, JOHN C., Earth Sciences! SCHLEHUBER, CAMERON J., Life Sciences, Othert SCHMIDT, MARIETTE C., Microbiologyt SCHMITT, PEGGYH., Biology, General SELGESTAD, JOHN G., Chemistry SHELBY, ROBERT M. Chemistry! SMOTKIN, DAVID, Biochemistry ? SPIEGEL, JOHNW, Economics SPOEHR, KATHRYN T., Psychology STEIGER, RICHARD J. Mathematics STEINBERG, ROBERT A., Biochemistry STOCKING, JAMES H, Engineering SUTER, GLENNW, II, Biology, General SWANSON, RICHARD M., Engineering SYMES, WILLIAM W., Mathematics TARDIFF, TIMOTHY J., Urban & Regional Planningt THROOP, ALAN L., Engineering

TIEMAN, SUZANNAH B., Psychology TIMKOVICH, RUSSELL, Chemistry TOPIC, JOHN R., Anthropology & Archaeology TURNER, MICHAEL S., Physics UNGERER, JUDY A., Psychologyt VILLEGAS, DANIEL J., Urban and Regional Planning! VLECK, DAVIDJ, Biology, Generalt WAGNER, JUDITH M., Biology, General? WARD, MICHAEL P., Economics WARD, THOMASE., Biochemistry WEINTRAUB, IEFF A., Sociology WHITE, GREGORY L., Psychology! WHITMORE, CHARLESS, Political Science WILHELM, NEIL C., Engineering WOLK, BRUCE A., Physics YEAGER, DANNY L, Chemistry YOSHIYAMA, RONALDM., Biology, Generalt YOUNT, JAMES C., Earth Sciences ZAITLIN, MARK P., Physics ZUCKERMAN, GREGG J., Mathematics ZVESPER, JOHN R., Political Science

#### COLORADO

ALLDREDGE, ALICE L., Biology, General ALLRED, DAVIDD, Chemistry BAYNTON, CHARLES G., Mathematics? BENDER, WELCOME W., Biology, General CORRUCCINI, ROBERT S., Anthropology & Archeology EASON, ERNEST D., Engineering FERGUSON, JILL, Biology, Generalt FOWLER, MARY I., Psychology FOX, DAVID L., Physics? HAGEDORN, ALFRED A. III, Chemistry HELD, ROYER L., Urban & Regional Planning! HULL, BARBARAE, Biology, General? JOHNSON, RICHARD W., Chemistryt MURCRAY, FRANK J., Physicst POSNANSKY, CARLAJ., Psychology ROADS, JOHN O. Atmospheric Sciences? ROCK, CHARLES O., Loology SHERIDAN, ROBERT E , Physiology!

#### CONNECTICUT

BONVILLIAN, JOHN D., Psychology CARTER, JOSEPH G., Earth Sciences CONVERSE, STEVEN L., Mathematics DINELLO, ROBERT K., Blochemistry EIFLER, DEBORAH J., Sociology ENTMAN, ROBERTM, Political Science FAIRBANKS, LYNN A., Psychology FERREE, G. DONALD, JR. Political Science FERRERO, BRUCE E., Mathematics GREIF, JEFFREY M., Physics HARPER, JAMES M., Physics HETH, CHESTER D., Psychology HEUMANN, MILTON, Political Science HOLBROOK, BRUCE E., Anthropology & KATZ, RICHARDS., Political Science LACY, JOHNH, Physicst LAW, JAMESS., Engineering LEVIN RICHARDC, Economics MILLER, ALANK, Engineerings MORTON, MARILYNI, Political Science MOSTOW, MARK A., Mathematics MULFLUR, JAMES H., Mathematics NAGY, WILLIAM E., Linguistics PROBER, DANIEL E., Physics PUKKILA, PATRICIA J., Biology, General RAFSKY, LAWRENCE C., Mathematics RESCORLA, LESLIE A., Psychology ROGERS, WILLIAMH, III, Mathematics! ROSEN, KENNETH T., Economics ROTHE, PAUL H., Engineering SIBLEY, DAVIDS., Economics VENTURINI EUGENE L., Engineering VERDERY, KATHERINE M., Anthropology & Archaeology WIESE, ROYF., Economics

#### **DELAWARE**

BECHER, DAVID Z., Chemistry†
DAVIS, MICHAEL W., Mathematics
DUVEKOT, CLAIRE E., Linguistics
MARTIN, RICHARD C., History & Philosophy of
Science
SHIMSHICK, EDWARD J., Chemistry
WOODBURY, STEVEN R., Urban & Regional Plannin

#### DISTRICT OF COLUMBIA

CHAMBERS, FRANK W., Physics CHAMBERS, WILLIAM W., Engineering MARCUSS, ROSEMARY D., Economics MCCLELLAND, JAMES L., Payrhology MEYER, STEPHEN A., Economics PELCOVITS, MICHAEL D., Economics RASTETTER, WILLIAM H., Chemistry? ROGERS, SHELLEY H., Physics

#### **FLORIDA**

ADELMAN, LEONARD, Psychology APRILETTI, JAMES W., Biochemistry BITTNER, MICHAEL L., Geneticat CHALKER, BRUCE E., Biology, General COX, DAVIDA., Mathematics DAVIS, SHIRLEY D., Psychology ELKIN, ROYS., History & Philosophy of Science FISCHER, ROBERT A., Mathematics FRIDOVICH, MARK A., Psychology GANCARZ, ALEXANDER J., JR, Earth Sciences GRAESSER, ARTHUR C., Psychologyt HANDEL, MICHAEL, Mathematics HANNA, CHARLES C., Mathematics HAWTHORNE, LARRY M., Engineering HELFMAN, PATRICIA M., Anthropology & Archeologyt

HILL, DENNY E., Sociology
JAMISON, ROBERT E., III, Mathematics
MASKIN, ERIC S., Economics!
MATTHEWS, DAVIDE., Blochemistry!
MAY, MICHAEL L., Biology, General
MCCARTHY, MICHELINE B., Biochemistry!
MCDIARMID, MERCEDES F., Zoology
MOODY, WILLIAM J., JR, Physiology!
NASH, LORIB., Biology, General!
PLUMMER, ORLAY E., Anthropology &
Archeology
RODRIGUEZ, JOSE M., Physics!

Archeology
RODRIGUEZ, JOSE M., Physics†
ROSE, BRUCE I., Mathematics†
SAUTHOFF, NED R., Physics
SCHRAMM, KATHERINE J., Economics
SCHUDY, CARY B., Atmospheric Sciences†
SHEFFIELD, JOHN S., Mathematics†
SOUTHWORTH, FINIS H., Engineering†
SPIEGEL, KATHLEEN W., Biology, General†
STUCKWISCH, DAVID C., Earth Sciences†
THRESHER, RONALD E., Zoology
WEISBARD, ALAN J., Economics†
WESCOURT, KEITHT., Psychology†
WESTON, ROBERT P., Engineering†
WHITE, SUSAN C., Zoology

#### GEORGIA

ACREE, ALLEN T. JR, Mathematics ! BAUGHCUM, STEVEN L., Chemistryt Beckmann, WILLIAMH., Mathematics? BELL, GEORGER., Biochemistry BERNER, NANCY H., Microbiology COLLINS, ROBERT L., Psychology DICKERSON, FRANK M., Economics FLOYD, HOWARD C., Physics GOLDSTEIN, SHELDON, Physics HARDEGREE, GARY M., History & Philosophy of Sciencet HARRELL, EVANS M., II, Physics † KING, ROLAND E., Linguistics MAYS, PAMELA V., Psychologyt MCCLATCHEY, JAMES N., Engineering PENROD, RUSSELL L., Psychology PETRIDES, JULIA T., Mathematics RITTER, LINDAB, Biochemistry SIKES, ELLIS D., JR, Mathematics ! STENGER, ALLEN L., Mathematics† TUGGLE, ROY S., Ill, Astronomyt WAIDE, Jack B., Biology, General

#### HAWAII .

BROWN, WILLIAMY., Zoology
LEIS, JEFFREY M., Biology, General†
MINAMI, SHARON A., Biology, General
MOTT, ELWOOD K., JR. Linguistics
NISHIHARA, HERBERT K., Mathematics\*
SWITZER, MARILYNF., Zoology
VITOUSEK, PETER M., Biology, General†

#### IDAHO

CRAPO, NORMAN L., Botany
DEMEYER, ARLEN A., Political Science
FORD, LAWRENCE H., Physics
LAMBERT, DONALD H., Anthropology &
Archeology
MCMURRAY, MARTHA J., Sociology
SCHULT Z., EMILY A., Anthropology &
Archeology
SMITH, CRAIG C., Engineering
THORNTON, ARLAND D., Sociology

#### ILLINOIS

ANDERSON, DANIELD, Mathematics ASHLEY, RICHARD A., Biochemistry BECKER, PAUIK., Psychology BENSON, HAROLDP., Mathematics BLOOM, RUTHW., Genetics† BONNEY, CHARLES A., Sociology BROWN, JOANNA L., Anthropology & Archeology

BURSTEIN, FHILIPL, Economics CACHEL, SUSAN M., Anthropology & Archaeology CARHART, STEVEN C., Engineering

CHEVALIER, ROGER A. Astronomy CHRISTIANSON, MICHAELL, Genetics! CLANCY, MICHAEL J., Mathematics CRAIN, LAWRENCE A., Engineering! CRAY, DAVID, Sociologyt DELLUTRI, DALE A., Mathematics DIEHL, RANDY L., Psychology DIETERICH, DAVIDA., Chemistry DOERING, JEFFREY L., Microbiology DOLECKI, GREGORYI, Genetical DUNHAM, RANDALL B., Psychologyt ELBAUM, BERNARD L., Economics EPSTEIN, SUZANNEL, Biochemistry! FARKAS, DANIEL R., Mathematics FARRAR, JAMES M., Chemistry FAY, ROBERT E., III, Mathematics FELDMAN, RONALD E., Linguistics! FIDDLER, MORRISB., Genetics FIEDOROWICZ, ZBIGNIEW, Mathematics ? FINKEL, RAPHAEL A., Mathematicat FRIED, DAVIDS., Mathematics GARDNER, ROY J., Economics† GOLDMAN, BARBARA M., Biology, General GOLDSTEIN, E. ALEXANDER, Economics† GOODMAN, COREYS, Biology, Generalt HEJHAL, DENNIS A., Mathematics HENKIN, BRUCE M., Chemistry HERINK, CURTIS D., Mathematics! HIGGINS, BRYON M., Economics HINCKLEY, NANCY M., Biology, General HORWITZ, RICHARDJ, Biology, General HOUART, GAIL L., Anthropology &

Archeologyt JAFFE, DAVIDM , Psychology JAMIESON, MICHAEL W., Engineering IOHNSON, RICHARDH, Engineering KAAR, DAVIDR, Engineering† KASTEN, RICHARDA, Economics KEENAN, JANICE M. Psychology KOENIG, WALTER D., Biology, Generalt KOLB, JOHN R., Chemistry KRAUS, RICHARD C., Political Science KRONICK, MEL N., Physics LANCASTER, DAVIDR, Engineering LARCOMBE, ELSAM, Biology, General LAVIN, MARK A., Mathematics LENTZ, BERNARDF, Economics LEONE, STEPHENR, Chemistry LOWRY, BURTL, Biophysics ! LUECKING, DANIELH, Mathematics MANELIS, LEON M., Psychology MCKEE, MICHAEL J., Economics MERKEL, ROBERTR., Chemistry MITCHELL, ERIK K., Botanyt MOCELLA, MICHAEL T., Chemistry MOJE, STEVEN W., Chemistry MOLNAR, DAVID A., Economics NOSEK, RICHARD D., Mathematics OBRYAN, NELSONB., R. Chemistry OHLENDORF, DOUGLASH, Biochemistryt OKEEFE, KELLY R., Chemistry OSTLUND, SUZANNEE, Biology, Generalt PARKER, NORMAN W., Physicst PIGAGE, LEE C., Earth Sciences RAWLINS, RICHARD G., Anthropology & Archeologyt REDDY, BERNARDJ., Economics

SANDERSON, RICHARD B., Engineering SCHAAR, RICHARD J., Mathematics SCHENNUM, WAYNE E., Biology, General SCHWAB, GARYM, Engineering† SCRANTON, MARY I., Earth Sciences† SHERMAN, PAUL W., Biology, General SIVERTSEN, BARBARA J., Anthropology & Anthropology & Anthropology & Anthropology

Atcheology SMITH, IAMES L., Economics t SPETH, DAVIDR, Biochemistryt SPINKA, NANCY J, Engineeringt SPONHOLTZ, DENNISK., Biochemistryt STELTE, DAVID JOHN, Engineeringt STEVENS, DUANEE, Physicst STROMQUIST, WALTER R., Mathematics TAYLOR, FREDERICK R., Biochemistry! THISSEN, DAVIDM, Social Science, Other! TIEMSTRA, JOHNP., Economics USAS, ALAN M, Engineering WEBER, MARY C. Sociology WILLIAMS, BRETT, Anthropology & Archeologyt ZAWADOWSKI, JOSEPHS, Anthropology &

INDIANA

Archeology†

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#### OHIO

ADAMS, ANN M., Sociology AUGUSTINE, TIMOTHY J., Mathematics† BENDA, CHARLES G., Sociology BENKART, GEORGIA M., Mathematics BIRSA, DAVID S., Earth Sciences? BRADLEY, DAVID J., Engineering! BRADY, JOHN B., Earth Sciences BRUNCK, TERENCE K., Chemistryt CLARK, ROBERT L., Biology, General COKEN, BRUCE M., Genetics COREY, BRIAN E., Physics CORN, MARY L., Biology, General DALY, THOMAS P., Physics DASCH, GREGORY A., Biology, General DICKINSON, BRADLEY W., Engineering DILLER, THOMAS E., Engineering! DRAPER, SARA J., Psychology DUNN, THOMAS J.JR, Biology, General FLIERL, GLENN R., Physics FOUCHE, DANIEL G., Physics FREYER, LINDA M., International Relations GALEHOUSE, DANIEL C., Physics GERO, DAVID W., Mathematics†
GILLISPIE, GREGORY D., Chemistry† GOLD, GEOFFREY H., Physics GREENLEE, WILLIAM J., Chemistryt HART, ROBERT S., Earth Sciencest HARTING, STANLEY C., Engineeringt HEDRICK, CHARLES L., Social Science, Other HEILE, FRANCIS B., Physics HIMES, JOHN G., Engineering HOFFMAN, MICHAEL I., Mathematics HOLLADAY, KENNETH W., Mathematics? HOSKINS, JEFFREY E., Mathematics HOWARD, DON A., History & Philosophy of Science HU, JAMES V., Engineering HUNT, HARRY B.,III. Mathematics JACOB, EVELYN J., Anthropology & Archeology JONES, MARK E., Physicst KATZ, MARK S., Psychologyt KEYES, MARCIA J., Astronomyt KIRI EY, PAUL O., Mathematics KIRLIN, JOHN A., Urban & Regional Planning! KNIPE, DAVID M., Biology, General KUCZMARSKI, EDWARD R., Biology, General LAHIEF, MAUREEN A., Mathematics MACBAIN, JOHN A., Mathematics MALONEY, TIMOTHY J., Physics MARSH, RICHARD L., Biology, Generalt MATHEWS, ROBERT O., Sociologyt MAVKO, GERALD M., Earth Sciences! MCKENZIE, KAY Q., Genetics MEUTH, MARK L., Biochemistry MILLER, JEFFREY O., Psychologyt NOTTER, DAVID R., Genetics! PIRIE, PHYLLIS L., Anthropology & Archeology PORTEUS, SUSAN E., Argriculture ROSE, EVAN A , Physics SCHOEN, RICHARD M., Mathematics! SEDENSKY, MARGARET M., Biology, General SEINOWSKI, PHILLIP A., Biochemistry SHURE, SALLY B., Biology, General? SYNDER, GRAYSON H., Biochemistry SUNSHINE, CARL A., Mathematics TECOMA, EVELYN S., Biology, Generalt THOMAS, DAVID, III, Economics THORN, MARTHA R., Biology, General TOMOLA, JAMES, Economics TRANGENSTEIN, JOHN A., Mathematics VALENTINI, JAMES J., Chemistryt VANHARLINGEN, DALE J., Physicst VARIAN, HALR, Economics WALTZ, SHARLA A., Biology, General† WATSON, DEBORAH K., Chemistryt WHITE, ALICIA J., Biology, Generalt WHITNEY, RONALD F., Mathematics WILLIAMS, GREGORY, Engineering WILLIAMS, THEODORE B., Astronomy YELTON, PATRICIA \$ , Mathematics YUN, DAVID Y., Mathematics

#### **OKLAHOMA**

ADLER, ANNETTE M., Social Science, Other? CAVES, CAPLTON M., Physics? DAUGHERTY, ELIZABETH B., Zoology DEMOSS, HAROLD L., Biology, General? DILL, KENNETH A., Biology, General? DURHAM, WILLIAM H., Biology, General? EDMONDS, DON E., Psychology GRAHAM, SIDNEY W., Mathematics GRIZZLE, John M., Zoology HERROLD, PAUL R., Engineering? KITCHEL, SIDNEY W., History & Philosophy of Science.

Science
KOEPPE, ROGER E.,II, Biophysics
LANE, EDWIN H., Chemistry?
LAWRENCE, JAMES F., Mathematics?
MARTIN, DONALD R., Engineering
MURPHY, JOHN B., Agriculture
RIZLEY, ROSS C., Psychology
SIZEMORE, STEPHEN R., Biochemistry
UMBER, RAY E., Botany
WOODARD, JAMES B.,IRE Engineering

#### OREGON

BRANSTATOR, GRANT W., Mathematics BUHLER, JOE P., Mathematics CHRISTIANSEN, DANIEL S., Economics GOY, MICHAEL F., Biology, General HAWKINS, JOHN P., Anthropology & Archeology HYDE, RODERICK A., Engineering! JOHNSON, RICHARD E., Sociology LEE, EDMUND G., Mathematics MCCUNE, BRIAN P., Mathematicst MCKAY, GORDON A., Earth Sciences MINOR, RICHARD D., Engineering MOHLER, CHARLES L., Biology, General MOHLER, NANCY S., Zoology MYERS, JOHN P., Biology, Generalt NOWELL, CARLAS, Prychology OLSON, GARY E., Biology, General POTTER, ANNE L., Political Sciencet PRIBNOW, DAVID G., Biology, General SKOLD, KAREN B., Sociology THOMAS, DAVID D., Biophysics WANN, CATHERINE R., Mathematics WINTERHALDER, BRUCE P., Anthropology & Archaeology

#### **PENNSYLVANIA**

ALLEBACH, JANP., Engineeringt ARMSTRONG, JOHN, III, Linguistics ASHMEAD, JOHN, Physicst ATKINSON, JANEM, Anthropology & Archeology BALL, WILLIAM A., Psychology BERDICK, THOMASE, Chemistry BIERBAUM, VERONICA M., Chemistry BIGGS, DOUGLAS C., Biology, Generalt BORNS, DAVIDJ, Earth Sciencest BRUBAKER, DAVIDA, Mathematics CHAPMAN, SALLY, Chemistry COHEN, DAVID M., Mathematics1 CORSARO, FELICIA A , Chemistry CULP, JEROME M., Economics t DANIELS, PAUL E., Mathematicat DELZER, GARY A., Chemistry DEPALMA, LEON M., Engineering! DICKEY, JOHN M. Astronomyt DODSON, PETER I, Earth Sciences LOYLE, BRIAN J. Physics EGAN, WAYNES, Engineering ERTEL, JAMES E., Mathematicat FELDMAN, HEIDI M., Psychology? FINLAY, BARBARAL, Psychologyt FREDRICKSON, RICHARD A., Physics! FREEDMAN, DARYLM, Sociologyt GERRA, RALPH A .JR, Mathematics

GILBERT, JAMES L., Physics GLADEN, BETH C., Mathematics HAAS, CAROL K., Chemistry HALPERIN, MARCIAS, Psychology HAUSER, JOHN R., Engineering HEFFNER, LINDA J., Physiology HEINBOKEL, JOHN F., Biology, General ISETT, LAWRENCEC, Engineering KAPLAN, LOUIS A., Earth Sciences? KARP, ROBERT W., Biochemistryt KROMMES, JOHN A., Physicst KUNESH, CHARLES J., Chemistry LAKOWICZ, JOSEPH R. JR, Biochemistry LANDIS, DALE L., Mathematics LAVENTHAL, MARK S., Mathematics† LEFFLER, JOHN W., Biology, General LEWIS, DALEM, Earth Sciences LILIENFELD, ALBERT, Political Science LIPPA, RICHARD A., Psychologyt LIVEZEY, ROBERT E., Atmospheric Sciences LO, CLARENCE Y., Sociology MASTERSON, ROBERT E., Engineeringt MCCURDY, YOLANDED., Biology, Generalt MCDONOUGH, RICHARD M., History &

Philosophy of Science MELE, EUGENEJ, Physics MELVIN, PAUL M., Mathematics MINARIK, JOSEPH J., Economics NEELY, ALICE M., Physiology NEKUT, ANTHONY G., Earth Sciences† NEWBOLD, I. DENIS, Earth Sciencest NUNEMACHER, JEFFREY L., Mathematics OXTOBY, DAVIDW., Chemistry! OYE, KENNETH A., Political Science PARKS, HAROLD R., Mathematics PASTIN, MARK J., History & Philosophy of Science PEITZ, ELIZABETH, Physiology PHILLIPS, WILLIAM D., Physics PRICE, JONATHANG., Earth Sciences? PUIG, CARLOS M., Mathematicat REISS, STEVEN P., Mathematicst ROHRLICH, SUSANNAH T., Biology, General ROSENBERG, JONATHAN M., Mathematics † RUBIN, ANN D., Mathematics SALZMANN, GEORGE S., Biophysics SCHAUFFLER, WILLIAM M., Anthropology & Archeology SEYBERT, DAVIDW., Biochemistry SHOGAN, ANDREWW., Mathematics SICILIANO, THOMAS V., History & Philosphy of Science STONESTROM, PETER, Engineeringt SZATROWSKI, TED H., Mathematics TURNBAUGH, WILLIAM A., Anthropology & Archaeology WACHTER, WILLIAM A., Chemistry WALTON, ROBERT L., Engineering! WEBER, ANITA L., Psychology WEINSTEIN, MICHAEL M., Economics WESSNER, RUSSELL L., Engineeringt WHALEN, ROBERT G., Biochemistry WILSON, PAUL A , Economics WILSON, STEVEN P., Biochemistryt WISHNER, KAREN F., Biology, Generalt ZAKIAN, VIRGINIAA., Biology, General ZANG, THOMAS A.JR, Mathematics

#### **RHODE ISLAND**

BOCKSTAEL, NANCY P., Economics DOYLE, MARJORIE E., Zoology ROBERTSHAW, GREGORY A., Physics† SMITH, CAROL L., Psychology

#### SOUTH CAROLINA

BÉIER, BARBARA F., Physics CHILDRESS, RONALD M., Political Science DRUCKER, LESLEY M., Anthropology & Archeology†
JEFFCOAT, ROBERT L., Engineering
MAY, MICHAEL E., Biochemistry†
MONTGOMERY, HENRY D.,]R, Engineering
SHERWOOD, GEORGE B., Physics†
WALKER, DOUGLAS W., Mathematics†

#### SOUTH DAKOTA

BROCK, DAVID A., Biology, General†
DIXON, NED S., Physics
HERREN, ROBERT S., Economics
LARRINGTON, STEPHEN L., Political Science
MEIER, KENNETH J., Political Science†
MYERS, JOHN K., Economics
POWERS, DALE R., Chemistry
SCHRADER, GLENN L., JR, Engineezing†
SNYDER, LEE R., Biology, General
ZOLNOWSKY, JOHN E., Mathematics

#### **TENNESSEE**

ANDERSON, NORMAN L., Biology, Generalt ARABIE, CLAY P., Psychology BAILEY, ROBERT B., Physics† BARTON, WILLIAM J., Engineering† DECRAND, THOMAS A., Physics† ELDRIDGE, CHARLES A., Biochemistry FOWLER, JAMES R., Political Science CLOVER, JOHN R., JR., Engineering MYERS, DANIEL A., Mathematics TARBELL, THEODORE D., Physics

#### TEXAS

AKRE, BARBARA G., Blology, General? ANDERSON, JUDITH L., Biology, Generalt BAKER, MICHAEL W., Urban & Regional Planning! BARTLETT, BRYAN L., Chemistryt BARTLETT, JAMES C., Psychology BELL, DAYID C , Sociology1 BROCK, BILLY C., Engineering! BROWN, KENNETH M., Anthropology & Archeologyt CASTLEBERRY, DONALD E., Engineering CAVENDER, CAROL J., Chemistry CLARK, VIRGINIA A., Earth Sciencest CUMMINGS, WILLIAM H.III, Psychologyt DREISS, SHIRLEY J., Earth Sciencest DUNLAP, THERESA P., Earth Sciencest EISNER, JULIAN R., Mathematics EWING, RODNEY C., Earth Sciences FLATH, DANIEL E., Mathematics† GLASGOW, DAVID A., Engineering GREEN, KATHERINE A., Biology, General HAMPTON, CHARLES E., Mathematics HARDIN, DAVID D., Engineeringt HAWKINS, ERIN R., Biochemistry HOCH, CHARLES G., Chemistryt HOLEYWELL, ROGER C., Earth Sciences HUFF, JOEL R., Chemistry IRBY, LYNN R., Biology, General JOHNSTON, WILLIAM M., Political Sciencet JONES, STEPHEN K., Engineering KELLEY, CLYDE E., Engineeringt KLAGER, KIM, Earth Sciences KOMKOV, STEPHANIE F., Social Sciences, Othert LAIRD, BONNIE E., Mathematics LEBOWITZ, BRIAN E., Economicst LEVY, DAVID L., Engineeringt LEWIS, ALBERT C., History & Philosophy of Science LYNCH, PAUL M. Engineering MABE, ROBERT D., Anthropology & Archeology MALEY, COLLEEN P., Anthropology & Archeology MARCUS, STEVEN I., Engineering MASTENBROOK, JOHN L., Psychologyt MCCLELLAN, JAMES H, Engineering MCGARITY, CATHLEEN O., Biochemistryt MCKEY, DOYLE B., Biology, General MCWHIRTER, DARIEN A., Political Science



MILLER, CONNIE H., Genetics! MOORE, LINDA R , Biology, General OIESEN, JAMES F., Economics PAUKERT, JAMES L., Biochemistry PITTS, JON T., Mathematics PLOG, STEPHEN E., Anthropology & Archaeology PUSTEJOVSKY, MICHAEL A., Engineering RISKIND, JOHN H. Psychology SCHIEBOUT, JUDITH A, Earth Sciences SMITH, CHARLES A., Chemistryt STREIT, GERALD E., Chemistry USSERY, CHRISTINE T., Microbiolgoyt VANDELL, KERRY D., Urban & Regional Planning WALDROP, AL M., Economicst WALKER, ROBERT B., Chemistry WELSH, MICHAEL 1. Zoology WILLIAMS, LAWKUNCE R. Mathematics WISE, JAMES D., JR, Engineering WOMACK, ROBERT L., Political Science YINGLING, CHARLES D., Physiology YOUNG, RYLAND F., Biochemistry

#### UTAH

AMES, WALTER L., Anthropology & Archeology BARRETT, WAYNE W., Mathematics DESPAIN, KEITH H., Physics GALLOWAY, RODNEY G., Engineering COODFELLOW, ROBYN J., Chemistry! GREENE, MARJORIE, Mathematics JONES, ROGER J., Biology, General LAMB, ANNE M., Psychology! MORRISON, KENT E., Mathematics RUSHFORTH, EVERETT S., Anthropology & Archaeology! RUSSELL, CHRISTOPHER P., Engineering SMITH, KATHLEEN T., Anthropology & Archaeology STACEY, DENNIS W., Biochemistry SUNDSTROM, ERIC D., Psychology

#### VERMONT

DOUGLAS, DOROTHY A., Botany† LUBIN, ADAM, Mathematics\* STOWE, LAWRENCE G., Biology, General† TYLER, ROBERT G., Engineering

#### **VIRGINIA**

BAUSUM, DAVID R., Mathematics
BRENNER, DOUGLAS M., Chemistry
BROWN, TERRENCE L., Physics
BUTLER, EDMUND J., Mathematics
CARROLL, WALTER F., Sociology†
COFFMAN, NANCY R., Chemistry†
COLLINS, FRANCIS S., Chemistry
COX, [ANIE S., Anthropology & Archeology
CROMARTIE, THOMAS H., Chemistry
DANIEL, SHERYL B., Anthropology & Archeology†
EAGAR, THOMAS W., Metallurgy†
JOHNSTON, JAMES C.,III, Psychology
KINGSTON, GEORGE C., Engineering

KOBURGER, CHARLES W., III, Engineeringt LARSEN, RICHARD A., Chemistry LINDSEY, ANNE H., Anthropology & Archeologyt LYSY, DUSAN G., Physics MCDERMOTT, DREW V., Mathematics† MONK, LEONARD G., Mathematics OPIE, THOMAS R., Chemistry SASSAMAN, CLAY A., Zoology SHOSTAK, ROBERT E., Mathematics SINGER, NICHOLAS C., Mathematics UHLANER, CAROLE J., Mathematics WANTZELIUS, PAUL O., Engineering WARREN, ROBERT B., Mathematics? WEBB, STEPHEN C., Engineering WIKSWO, JOHN P., JR, Physics WILKINSON, WILLIAM C., Psychology WILLETT, JOHN C., Atmospheric Sciences WRICHT, EDWARD L. Astronomy

#### WASHINGTON

ACHEN, CHRISTOPHER H., Political Science ADAMS, RUSSEL M., Psychology ADOLPHSON, ALAN C., Mathematics BAHLER, LAWRENCE G., Engineeringt BORROZ, WILLIAM T., Engineering BURKE, WYLIE G., Genetics COKELET, EDWARD D., Earth Sciences CUNNINGHAM, CHRISTOPHER, Astronomy DEMARTINI, EDWARD E., Zoology FENNER, DOUGLAS H., Psychology GANDERS, FRED R. Botany GREENING, TIMOTHY S., Economics? HECHT, JULIA A., Anthropology & Archeology HEGGEN, PAMELA J., Anthroplogy & Archeology KAMMEYER, PETER C., Mathematics KAUTZ, RICHARD L., Engineering KEARL, MICHAEL C., Sociology KIMBALL-MARCH, KATHRYN, Anthropology & Archeologyt KIMERLING, ARTHUR )., Geographyt KOTTWITZ, ROBERT E., Mathematics ? LONG, PHILIP E., Earth Sciences MAJORS, JOHN E., Biophysics MARSTON, PHILIP L., Physics MARTINIS, JOANNE, Genetics MESSER, ROBERT A., Mathematics PETERSON, BRUCE E., Geographyt REITER, CAROL R., Anthropology & Archeology SENEAR, ALLEN W., Biochemistry THOMPSON, NORMAN L., Urban & Regional Planning VENTUR, PIERRE E., Anthropology & Archeology! WATSON, BRUCE A., Biochemistry WIERMAN, JOHN C., Mathematics

#### WEST VIRGINIA

BACHMANN, EDWARD B., Socialogy BELLOTT, EMILE M., JR., Chemistryt CANTLEY, LEWIS C., Chemistry
CEPERLEY, DAVID M., Physics
CHINAULT, ALAN C., Chemistry
HANSEN, ROBERT T., Chemistry
JUSTICE, PENNIFORD L., Genetics
MCROBERTS, RICHARD D., Engineering!
RISSLER, JANE F., Botany

BACLAWSKI, KENNETH P., Mathematics

#### WISCONSIN

BORCHERT, STEVEN J., Chemistryt BROWN, REBECCA H., Mathematics BRUCE, KIM B., Mathematics DANNER, FREDERICK W., Psychology DORNFELD, WILLIAM H., Engineeringt DUMESIC, JAMES A., Engineering DZIADOSZ, GREGORY M., Psychologyt ELMERGREEN, BRUCE G., Astronomy EVERS, MARK, Sociology FINCH, DAVID V., Mathematics HAGER, DOUGLAS F., Chemistry HAHN, BRIAN K., Chemistry HANSEN, EVERETT M., Botany JONES, GILBERT G., Chemistry KEPPEL, ROBERT A., Chemistry KRACHT, WILLIAM R., Chemistry LANDGREN, DALE A., Economics LANGSTEN, RAYMOND L., Sociologyt MAYER, JEROME F., Engineering MEISSNER, JEFFREY R., Anthropology & Archeology MILLER, JOANNE, Sociology NILSON, LINDA B , Sociology NIMMER, RONALD P., Engineering NOWACK, JUDITH A., Anthropology & Archi ology PALMER, DAVID W., Physics PEET, ROBERT K., Biology, General PILARSKI, LINDA M., Biochemistry RADLOFF, DAVID L., Agriculture SARAZIN, CRAIG L., Physicst SCHLIPF, JOHN S., Mathematics SCOTT, BRIAN M., Mathematics SETTLE, RUSSELL F., Economics SEYMOUR, ROBERT W., Engineering SHAPIRO, DANIEL B., Mathematics SLATER, JOHN, Engineeringt STARK, WILLIAM S., Psychology STILLER, ROBERT L., Engineering TAX, ROBERT E., Mathematics? WEGNER, WARREN W., Earth Sciences

#### **WYOMING**

CARPENTER, CHADWICK H., Engineering CARPENTER, GAIL A., Mathematics DONE, WILLIAM I., Engineering† WILLARD, ALVIN K., Chemistry†



# Institutions Granted Traineeships and Chosen by Graduate Fellowship Awardees-Fiscal Year 1972

AlbaMA Abdun Chierenty	U.S. Institutions	l'otals	Tealnee	Fellow-	U.S. Institutions	Totals	Trainer.	Fellow-
ALASKA		_	Ships	Ships				
ALSAK	Habitania A 44	7	6	1	Northern Illingis University		•	
Number	University of Alabama	3	3	0	Northwestern University			
ABICONA  ARICONA  ARICONA  University of Changes  24 17 7 10 0 0 University of Illinocal Victoria of Changes  10 University of Aricona  11 0 University of Illinocal Victoria of Changes  12 17 7 NDIATA  University of Aricona  13 12 15 16 20 University of Illinocal Victoria of Illinocal					Southern Illinois University	38		
ARIZONA Arizona State University of Indicast Chinese 27 4 4 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	University of Alaska	1	1	٥	University of Chicago	7		
Aditional State University   10   10   0   0   University of Artenas   1   1   1   0    ARANASAS   NDIANA   NDIANA   1   1   1   0    ARANASAS   NDIANA   1   1   1   0    ARANASAS   NDIANA   1   1   1   0    Columnating of Artenas   2   4   1   3    Columnating of Artenas   3   3   0    Columnating of Colum		•	-	v	University of Illinois/Urbana	47		
University of Artinosis	Arizona State University	10	10		University of Illinois/Chicago Circle	0/		
ARKANSAS	University of Arizona				University of Illinois/Medical Cott	•		-
Colorest	7		.,	,		•	•	0
CALIDONIA								
California Institute of Tech		3	3	0	Purdue University			-
Clearant Crassfate School		_			University of Notre Dame		-	
Lone Linds University	Character to the control of the cont					13	12	1
Stanford University   18								
Dispersity of CalifornialParkeley	Come Linda Oniversity				University of Laura			2
University of California Davis 20 13 7 Kanas State University 1 11 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Hologram of California Dark at the					18	13	5
University of Californial changes   39   22   12   KENTUCKY   13   11   1   1   1   1   1   1   1								
University of Californial Canada Sangeles 39 27 12 KENTUCKY University of Californial Canada Sangeles 39 27 12 University of Californial Sangeles 39 31 12 University of Californial Sangeles 39 31 12 University of California Sangeles 39 31 12 University of Sangeles 39 32 University of Sange	University of California Dayle				Kansas State University	11	. 10	i
Colorestity of Californial Reverside   12   9   3   University of Kentocky   8   8   0	University of Californial or Angeles			-		12	11	1
University of CalifornialSan Dirgo	University of Californial Riverside							
University of CulifornulSan Facetace   3   1   1   1   1   1   1   1   1   1	University of California/San Dings	-			University of Kentucky	8	8	٥
University of California/Santa Barbara   9   8   1   Countries of California/Santa Crus   3   1   2   Countries of California/Santa Crus   3   1   2   Countries of Sire University   12   10   2   2   1   1   1   1   1   1   1   1	University of Californial San Francisco				University of Louisville	5		
University of California/Santa Cruz	University of California Santa Backers							-
University of the Pacific	University of California Santa Cent				Louisiana Polytechnic Institute	1	1	
University of Santa Clara   2	University of the Pacific				Louisiana State University		_	
U.S. International University   1   1   0   1   0   1   0   1   0   1   0   1   0   1   0   0	University of Santa Clara			_	Louisiana State Univ/Med Center			
Colorado School of Mines	University of Southern California		-		Louisiana State UniviNew Orleans	•		
Colorado School of Mines   2   2   0   MAINE	U.S. International University				Loyofa University			-
Colorado School of Miner		•	•	v	Tulane University			
Colorado State University		_	_			••	₽.	3
University of Colorado	Coloredo Senso Universita				University of Maine			_
University of Denver						4		0
CONNECTICUT							•	
University of Connecticut		2	2	0	Linius riopkins University			10
Westeyan University						15	12	3
Part				2				
DELAWARE		-		0	Boston College	3 .	3	0
University of Delaware		117	21	96	Boston University	6	5	i
DISTRICT OF COLUMBIA					brandels University	10	7	3 .
American University	University of Delaware	12	10	2	Clark University	3	3	. 0
Catholic University	DISTRICT OF COLUMBIA				Tarvall Tools to the	196	18	178
Catholic University	American University	2	2	٥	Lowell Jech, Institute		1	0
George Washington University	Catholic University	10			Markhanten Hatranit		49	198
Georgetown University	George Washington University	6 -	6		Tuba Haisanaits			0
Howard University	Georgetown University	7	6		University of Managhanana			0 :
Florida State University   15   13   2   MICHIGAN	Howard University	2	2		Woods Hole Oceanness-Listers			1
Nova University	FLORIDA				Worcester Polytechnic Inst.			1
Nova University of Florida	Florida State University	15	1.3	2		1	1 :	0
University of Florida	Nova University					-		*
University of Miami	University of Florida			-	Michigan State University			
University of South Florida   2		12			University of Detacts		-	
Atlanta University	University of South Florida	2	1		University of Michigan	-		
Emory University					Wayne State 1 Indicate its			
Emory University	Atlanta University	1	1 .	ο .	Western Michigan Haliannika			•
Ceorgia Institute of Technology	Emory University					1	1	0
Ceorgia State University	Georgia Institute of Technology							
Medical College of Georgia	Ceorgia State University	,				44	28	16
University of Georgia   17	Medical College of Georgia							
HAWAII	University of Georgia		-	-	Mississippi State University	3	3	0
University of Hawaii		• • • • • • • • • • • • • • • • • • • •	,	•	University of Mississippi	3		-
IDAHO					University of Southern Mississippi	1	1	ō
Item		13	6	5				•
University of Idaho				•			•	
1	Flatopeath of theka				University of Missouri/Columbia			-
DePaul University		3	3	. 0	University of Missouri/Kansas City			7.
Illinois Institue of Technology 12 12 0 MONTANA Illinois State University 2 0 Montana State University 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					University of Missouri/Rolla	- :		. •
Illinois Institute of Technology 12 12 0 MONTANA Illinois State University 2 2 Montana State University 1	DePaul University	1	1 .	o ·	Washington University			
Illinois State University 2 2 Montana State University 2	Illinols Institut of Technology	12			MONTANA	20	13	3
Loyola University	llinois State University	2	2					
	Loyola University	2	2	0	University of Montana			a na hafarinin e
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## Institutions Granted Traineeships and Chosen by Graduate Fellowship Awardees-Fiscal Year 1972-Continued

U.S. Institutions	Totals	Trainer- Ships	Fellow- Ships	U.S. Institutions	Totals	Traince- Ships	Fellow- Ships
NEBRASKA				OKLAHOMA			•
University of Nebraska	9	7	2	Oklahoma State University		11	. 3
NEVADA				University of Oktahoma	11	10	,1
University of Nevada	2	2	o	OREGON			
NEW HAMPSHIRE				Oregon Graduate Center	1	1	0
Dartmouth College	6	3	3	Oregon State University		10	1
University of New Hampshire	7	6	1	Portland State University		1 .	. 0
NEW JERSEY				University of Oregon		<b>9</b> -	4
Newark C of Engineering	1	1	0	University of Portland	1	1	. 0
Princeton University	88	20	68	PENNSYLVANIA			
Rutgers, The State University	13	13	0	Bryn Mawr College		1	٥
Seton Hall University	1	ı	0	Carnegie-Mellon University		17	4.
Stevens Institute of Technology	8	7	1	Drexel Institute of Technology		3	0
NEW MEXICO				Duquesne University		1	0
New Mexico Inst. of M&T	1	1	0	Hahnemann Medical College		1 .	. 0
New Mexico State University	7	6	i	Pennsylvania State University		27	. 2
University of New Mexico	10	8	2	Phila. C of Pharmacy & Sci.	1	1	٥
NEW YORK				Temple University			0
	1	1	0	Thomas Jefferson University		1	. 0
Adelphi University	1	1	0	University of Pennsylvania		23	24.
City University of New York	12	11	1	University of Pittsburgh		. 13	3
Clarkson C of Technology			i	Villanova University	1	1	0
Columbia University	48	28	20	Medical College of Pa	1	1	0
Cooper Union	1	1	0	RHODE ISLAND			1
Cornell University	96	31	65	Brown University	16	13	3
Fordham University	3	. 3	0	Providence College	ı	1	٥
Mt. Sinai School Medicine	1	C	1	University of Rhode Island	3	3	0
New School for Soc. Research	2	2	. 0	SOUTH CAROLINA			100
New York Medical College	ı	1	0	Clemson University	. 8	8	0
New York University	27	21	6	Medical U of South Carolina	. 2	1	
Polytechnic Inst. of Brooklyn	14	14	. 0	University of South Carolina	3	3	0
Rensselaer Poly Inst.	20	13	7	SOUTH DAKOTA			
Rockefeller University	7	1	6 0	South Dakota S of Mines		1	0
St. Bonaventure University St. Johns University	1 2	1 2	0	South Dakota State University	• 3	3	0
State University of New York:	•	•	ν.	University of South Dakota	- 2,	2	0
C of Forestry at Syracuse Univ.	3	3	0 .	TENNESSEE		1 1 1	
Downstate Medical Center	1	. 1	. 0	George Peabody College	1	1	•
SUNY at Albany	1	1	. 0	Memphis State University	1	.1	0
SUNY at Binghaniton	Ŧ	1	0 .	Univ of Tennessee/Knoxville Univ of Tennessee/Memphis	16 2	13 1	3
SUNY at Buffalo	12	12	0	Vanderbilt University	11	10	1
SUNY at Stony Brook	7	6	1	TEXAS	•••		
Upstate Medical Center	1	. 1	0	Baylor University	1	1	
Syracuse University	17	15	2 .	Baylor Univ/Med C	i	1	0
Union College and University	1 19	1 15	0	North Texas State Univ	2	2	Ä
University of Rochester Yeshiva University	5	3	2	Rice University	19	11	8
	•	-	•	Southern Medthodist Univ		6	3
NORTH CAROLINA				Texas A & M University	13	10	3
Duke University	21	10	11	Texas Christian University	1	1	0
North Carolina State Univ. at Raleigh	17	17	0	Texas Tech University	4	3	1
University of North Carolina	19 3	13 3	6	Texas Woman's University	1	1	0
	,		Ų	University of Houston	, 6	6	0
NORTH DAKOTA				University of Texas/Arlington	1	1	0
North Dakota State University	. 2	2 .	. 0	University of Texas/Austin	36	26	10
University of North Dakota	3	3	. 0	University of Texas/Dallas	1	0	1
OHIO				UTAH			
Bowling Green State University	2	2	0 -	Brigham Young University	3	3	0
Case Western Reserve University	23	20	3	University of Utah	16	12	4
Kent State University	3.	3	. 0	Utah State University	7	6	1
Miami University	1	1	ø	VERMONT			
Ohio State University	29	26	3	University of Vermont	3	3	0
Ohlo University	3	3	0	VIRGINIA			25.5
University of Akron	1	1	0	College of William and Mary	3	3	0
University of Cincinnati University of Dayton			0	University of Virginia	10	10	Ď
University of Toledo	1	1	0	Virginia Commonwealth University	1		0
		Iru, Au	<b>,</b>	Virginia Polytechnic Institute	10	10	0



## Institutions Granted Traineeships and Chosen by Graduate Fellowship Awardees-Fiscal Year 1972-Continued

US. Institutions	Totals	Traince Ships	Fellow- Ships	U.S. Institutions Totals	Traince- Ships	Fellow- Ships
WASHINGTON				WYOMING	3	
University of Washington	43	28	15	University of Wyoming 4	3	1
Washington State University	9	8	1			
West Virginia University	7	6	1	TOTAL AT U.S. INSTITUTIONS	1,808	1,528
WISCONSIN				See Following Page		
Institute of Paper Chemistry	1	ŧ	0	See Following Fage		
Marquette University	3	3	٥			
University of Wisconsin/Madison		36	49			
University of Wisconsin/Milwaukee		5	1	GRAND TOTALS 3,358	1,808	1,550



#### FELLOWSHIP AND TRAINEESHIP AWARDS

## Foreign Institutions Chosen by Graduate Fellowship Awardees, Fiscal Year 1972

Ni Ni	UMBER	NU!	MBER
AUSTRALIA University of Adelaide	1	SCOTLAND University of Edinburgh University of Glasgow	
CANADA		UNITED KINGDOM	
University of Alberta	1	University of Cambridge	7
University of British Columbia	3	University of Essex	1
University of Toronto	1	University of London	1
Union C of British Columbia	1	University of Oxford	3



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